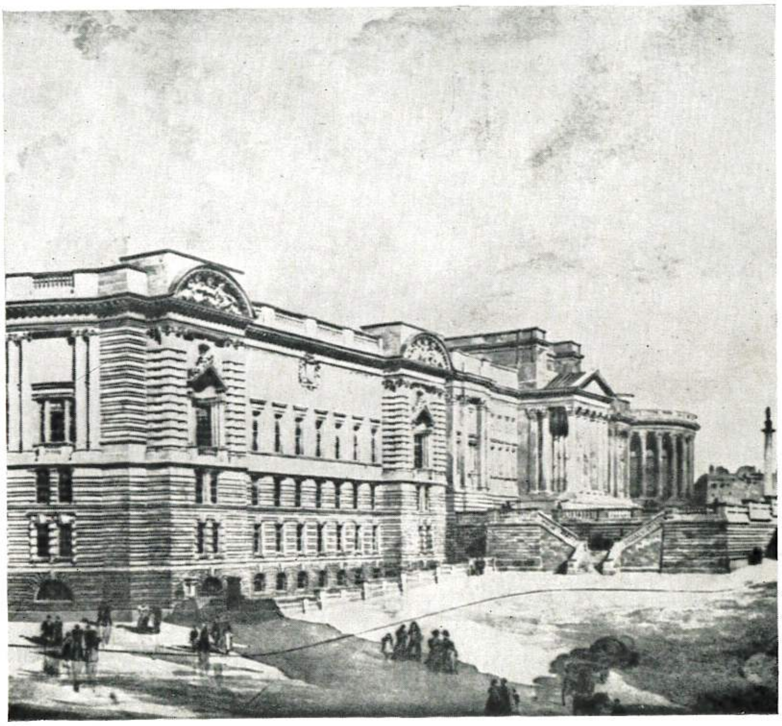
LIVERPOOL

Libraries, Museums & Arts Committee

BULLETIN



Vol. 5 Nos. 1 and 2 NOVEMBER 1955

THE

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VOL. 5 NOS. 1 AND 2 · · NOVEMBER 1955

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CONTENTS

Note.—In general, articles are written by officials of the Libraries, the Museums, or the Walker Art Gallery. Correspondence may be addressed to the authors of the articles or to members of the Editorial Board, c/o the Libraries, Museums and Arts Committee, William Brown Street, Liverpool 3, comprising: Alderman J. Johnstone, *Chairman;* Dr. G. Chandler, M.A., F.L.A., F.R.HIST.S., F.R.S.A., *City Librarian;* J. H. Iliffe, O.B.E., M.A., F.S.A., F.M.A., *Director of Museums;* Hugh Scrutton, M.A., A.M.A., *Director, Walker Art Gallery;* and Ralph Fastnedge, D.F.C., B.A., *Deputy Director, Walker Art Gallery,* and *Editor.*

Page

3 *Notes on the Earlier History of the City of Liverpool Public Museums,* by W. K. Ford, M.SC., A.R.C.S., F.R.E.S., A.M.A., Keeper, Department of Invertebrate Zoology, Liverpool Public Museums.

17 *The Rawdon Syrinx (Pan-pipes),* by Francis Huxley, B.SC., Assistant Keeper, Department of Ethnology, Liverpool Public Museums.

19 *William Roscoe, Botanist,* by H. Stansfield, A.R.C.S., D.I.C., F.L.S., F.M.A., Keeper, Department of Botany, Liverpool Public Museums.

63 *The Venus' Flower Basket,* by W. K. Ford.

Correction to last issue, Vol. 4, *Nos.* 1 *and* 2, *Oct.* 1954. The portrait of George II, by Robert Edge Pine, at Audley End (Fig. 4 in Mr. Woodward's article *Four Royal Portraits at the Walker Art Gallery*), was reproduced by kind permission of Lord Braybrooke and the Ministry of Works.

NOTES ON THE EARLIER HISTORY OF THE CITY OF LIVERPOOL PUBLIC MUSEUMS

W. K. Ford

INTRODUCTION

The complete history of Liverpool Museum would form a story of the utmost interest. This story would need to be told by a number of workers, each treating a different aspect, since the collections cover so wide a field of knowledge. The story would moreover be a long one and would require at least a series of articles in the *Bulletin*. The present writer has found the study of the people formerly associated with the Museum and with the scientific societies of Liverpool a very fascinating one. He feels therefore that even a brief and somewhat one-sided survey of the Museum's past history may be of help to other workers and stimulate renewed interest in its future.

The present City of Liverpool Public Museums[1] (the official title) trace back to two roots and the appropriate collections are often referred to as the Derby and Mayer Museums respectively. The Derby Museum originated in 1851 when the 13th Earl of Derby bequeathed his collection of zoological specimens to the Corporation. The Mayer Museum dates from 1867 when Joseph Mayer, F.S.A., a Liverpool goldsmith, gave his collections of antiquities, pottery and historical relics. It is the former that we are concerned with here and the latter will only be mentioned incidentally.

The 13th Earl of Derby was well known as a zoologist and had been President of the Linnaean Society and of the Zoological Society of London. He had a fine collection of living animals in the extensive grounds of Knowsley Hall. Animals that died were carefully preserved and added to his private Museum. The Derby bequest consisted principally of mammals and birds. It included a large number of types and specimens of historical interest. Among the latter were, a well marked egg of the Great Auk (*Alca impennis* L.) and specimens of the extinct Labrador Duck (*Camptorhynchus labradorius* (Gmelin)).

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[1] There were at least two earlier Museums in Liverpool, viz: the private Museum of William Bullock (1801—1909), and the Royal Institution Museum (about (1820—1877). See G. H. Morton (1894) and H. A. Ormerod (1953).

FROM 1851 TO 1892—THOMAS JOHN MOORE, DIRECTOR[2]

The first Director, T. J. Moore (1824—1892), who was engaged at a salary of £150 a year, had formerly been employed by the 13th Earl of Derby. He joined the Earl's staff at Knowsley at the age of 18. Moore had not the benefit of a University education and his remarkable knowledge must have been acquired by his own efforts. He was evidently a very hard-working and versatile man. An "in memoriam", published in the *Liverpool Courier*, November 4th, 1892, said that his interest in the cause of science and in the institution over which he presided knew no bounds. The writer also stated that it had been given to few men to go through a tolerably long life with less friction. Moore retired in April 1892 and died October 31st, 1892.

The first home of the Museum was at the former Union News Rooms, Duke Street. These were purchased for the purpose of housing the Public Library and Museum. The Library was opened on October 18th, 1852, and the Museum, consisting entirely of natural history specimens and contained in two rooms, on March 8th, 1853. The accommodation cannot have been very suitable, but fortunately Mr. (subsequently Sir William) Brown, M.P., offered to provide a sum of money for a new building. Mr. Brown laid the first stone on April 15th, 1857, and formally opened the building on October 18th, 1860, in the presence of an immense assemblage. In the evening the Mayor presided at a banquet at St. Georges Hall, while the next evening he entertained 1,200 guests at a soirée at the Town Hall. The transfer of specimens from Duke Street to the new building continued for a full year after the formal opening.

Those early days were a period of acquisition and the stock books show a flood of material acquired by gift, purchase, or exchange. The tenth *Annual Report* (1862) speaks of the indefatigable exertions of Mr. T. J. Moore, who had placed himself in correspondence with similar institutions in all parts of the world. Moore wrote a useful booklet giving instructions on collecting to members of the merchant navy and travellers. Some of the more enterprising of such collectors were made Associates of the Literary and Philosophical Society of Liverpool under whose auspices the publication was made.

A guide to the Museum was published in 1869 and sold at a price of 1d. It contained 32 pages of small print but no illustrations.

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[2] He was actually termed "Curator" but for simplicity we have used the word "Director" throughout. H. O. Forbes was the first head of the Museum to be given the latter title.

The main hall was then occupied by sculpture, in the centre being a statue of Lady Godiva. Three rooms downstairs were devoted to mammals of which there was a large selection. These included the skeleton of a Hump-backed Whale (*Megaptera nodosa* Bonnet) which was stranded in the Mersey near Speke in the year 1863. This skeleton was on exhibition until 1941 when it was damaged in the bombing of the Museum. Birds were shown in four rooms upstairs and reptiles and fishes in another. The specimens in the above rooms were mostly of foreign species and there was a separate room for specimens of British mammals, birds and fishes. The invertebrates, both British and foreign, were set out in table cases in the centres of the bird and reptile rooms. An aquarium room is mentioned but the guide gives no details concerning it.[3]

The 1869 guide makes no mention of botany and from the annual reports we find that botanical specimens were rarely received by the Museum in its earlier days. This was presumably due to the fact that the Liverpool Botanic Gardens then dealt with this subject. They possessed large herbaria which eventually came to the Museum in 1909. One room was devoted to geology. For many years however this subject received much less attention than zoology. As late as 1893 Mr. G. H. Morton spoke of the geological collection as "of far too limited extent to afford much instruction"; although by that time such important collections as the Rutter-Phillips minerals and the Austin crinoids had been received.

We may mention that specimens given by Joseph Mayer in 1867 were on exhibition in 1869. Their description occupied nine pages of the guide. The Walker Art Gallery was not opened until 1877 and one of the rooms at the Museum was described as a picture gallery. Thomas Greenwood (1888) gives a plan of the Museum which is in broad agreement with the 1869 guide.

The period of time that Moore was Director closely coincides with the period that the Rev. H. H. Higgins (1814—1893) was associated with the Museum (Fig. 1). Higgins spent a great part of his time for 37 years working voluntarily in the Museum. For 16 years he was Chairman of the Museums Sub-Committee. Among his achievements were the arrangement of a very fine series of invertebrate animals, the publishing of guides and other articles on Museum work, and the initiation of a series of loans to schools. He played an important part in the founding of the Museums Association of which he was the

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[3] Aquaria were first installed in 1857.

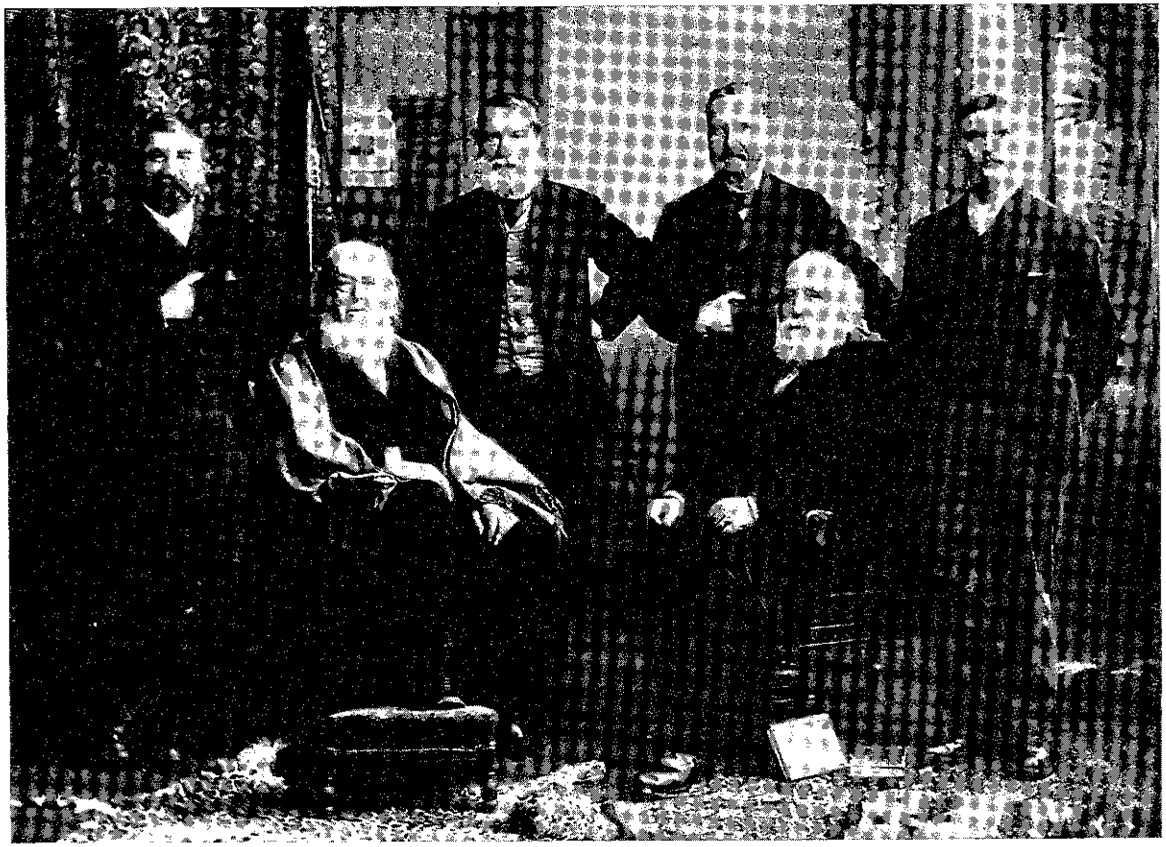

Fig. 1. Group of Museum Workers about 1890

J. Chard F. P. Marrat *Unidentified* P. Entwistle
H. H. Higgins T. J. Moore

first President. It is no detraction from Moore to say that Higgins appears often to have been the prime mover and that his work influenced not only Liverpool but also the museum world in general. G. H. Morton (1894) refers to him as the "Honorary Director". Higgins and Moore evidently worked in close co-operation and harmony.

Members of the Museum staff associated with Moore included R. Paden, F. P. Marrat, J. Chard and C. T. Gatty. R. Paden, a zoologist, acted as Director in the period between Moore's death and Forbes taking office. He died on November 19th, 1894 at the early age of 44. F. P. Marrat was a conchologist and mineralogist who worked at the Museum for over 40 years. J. Chard was employed mainly as an artist and executed many drawings to illustrate the display of invertebrates set out by Higgins. C. T. Gatty was Curator of the Mayer Collection from 1873 to 1884.

The Museum was popular from the start and in the twelfth *Annual Report* (1863—64) we learn that the attendance had reached the figure of 488,123 persons for the year. This figure was well in excess of the population of Liverpool given in the 1862 census, i.e. 443,938. The attendance figures were even more remarkable when we remember that the Museum was then only open to the public on four days in the week. Tuesdays and Fridays were reserved for cleaning, the arrangement of specimens, and for the benefit of students and artists. These persons had to apply to the Committee for special tickets. In 1889 the number of students' days was reduced to one, but not until 1922 was the Museum open on every week day. Sunday opening began in 1918. At times during the last century the Museum was open in the evening in the winter months.

Mr. T. J. Moore's half yearly reports give the names of many special visitors to the Museum. These included not only scientists such as Professor T. H. Huxley, Alexander Agassiz and A. R. Wallace but distinguished men in other ranks of life such as the missionary Robert Moffat and General Grant of the United States. Overseas visitors in 1887 included the Queen of Hawaii and General Tani, Minister of Commerce, Tokio.

The deaths of Moore in 1892 and Higgins in 1893 marked the end of an epoch. Large collections had been acquired, contacts with distinguished scientists had been made, and pioneer work carried out in a number of directions. Very many public lectures had been given and these had attracted large audiences. Yet towards the end of the period both Moore and Higgins were of advanced age. Any big new

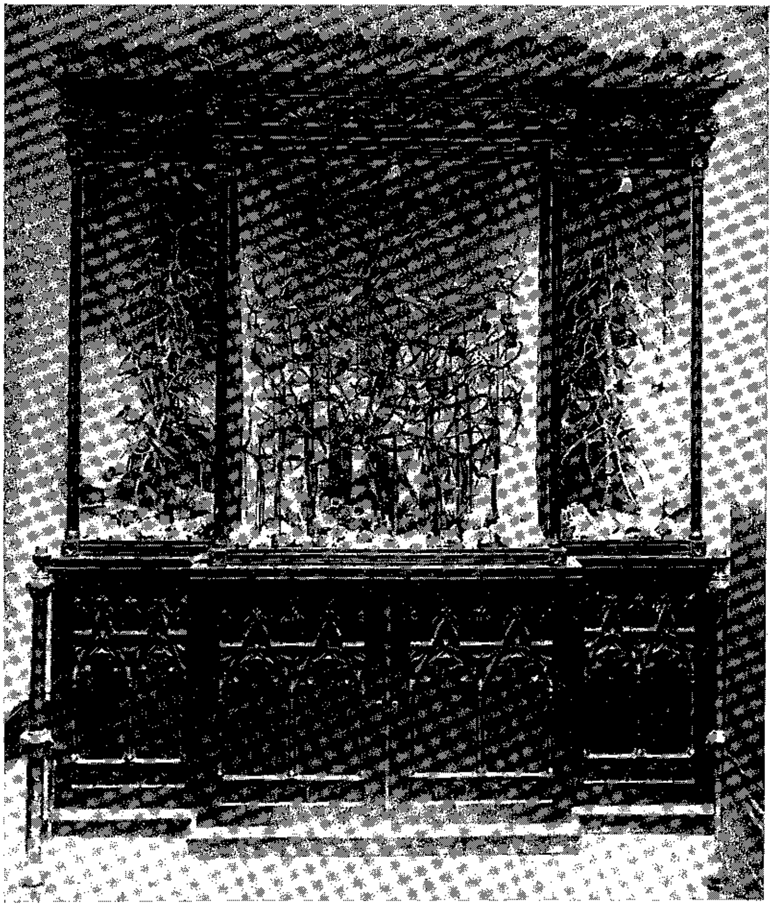

Fig. 2. Cabinet of Humming Birds. Presented by Mr. F. Taylor in commemoration of the Jubilee of Her Majesty Queen Victoria, 1887.

development would need to be the work of younger men. Mr. G. H. Morton in his Presidential address to the Liverpool Naturalists Field Club stated that the Museum was awaiting a new impetus. There would need, he said, to be a very considerable increase in working expenses; for the Committee would not be likely to find another cultured gentleman like the Rev. H. H. Higgins to devote nearly the whole of his time to the superintendence of the Museum for the pure love he had of the work. Professor W. A. Herdman described it at this time as "one of the best museums in the country but not quite up to date".

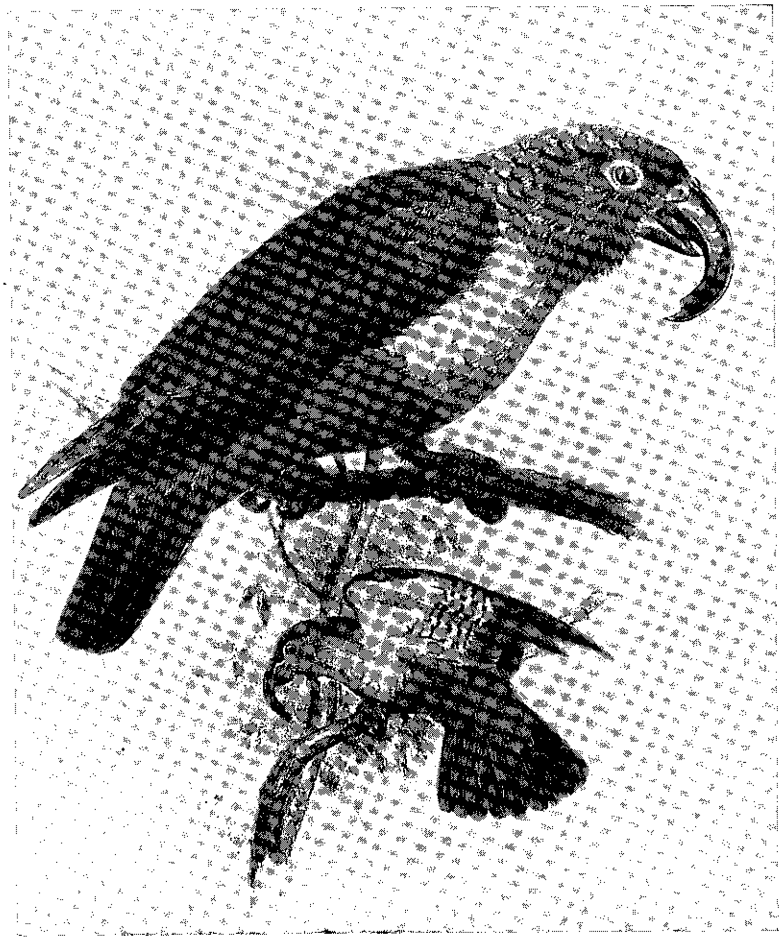

Fig. 3. Norfolk Island Parrot—*Nestor norfolcensis* Pelzeln. A plate from Liverpool Museums Bulletin, Volume I.

FROM 1894 TO 1911—HENRY OGG FORBES, DIRECTOR

Fortunately a new era began with the appointment of Dr. H. O. Forbes (1851—1932) who took up his duties in February 1894. Forbes had intended to enter the medical profession but the loss of an eye led to his abandoning this career shortly before he qualified. From 1891—1893 he had been Director of Canterbury Museum, New Zealand. Before that he was well known as a traveller and ornithologist. He published in 1885 his book *A Naturalist's Wanderings in the Eastern Archipelago*. In 1885—6 and 1889 he led expeditions to explore Mount Owen Stanley in New Guinea. He retired from the Museum's service

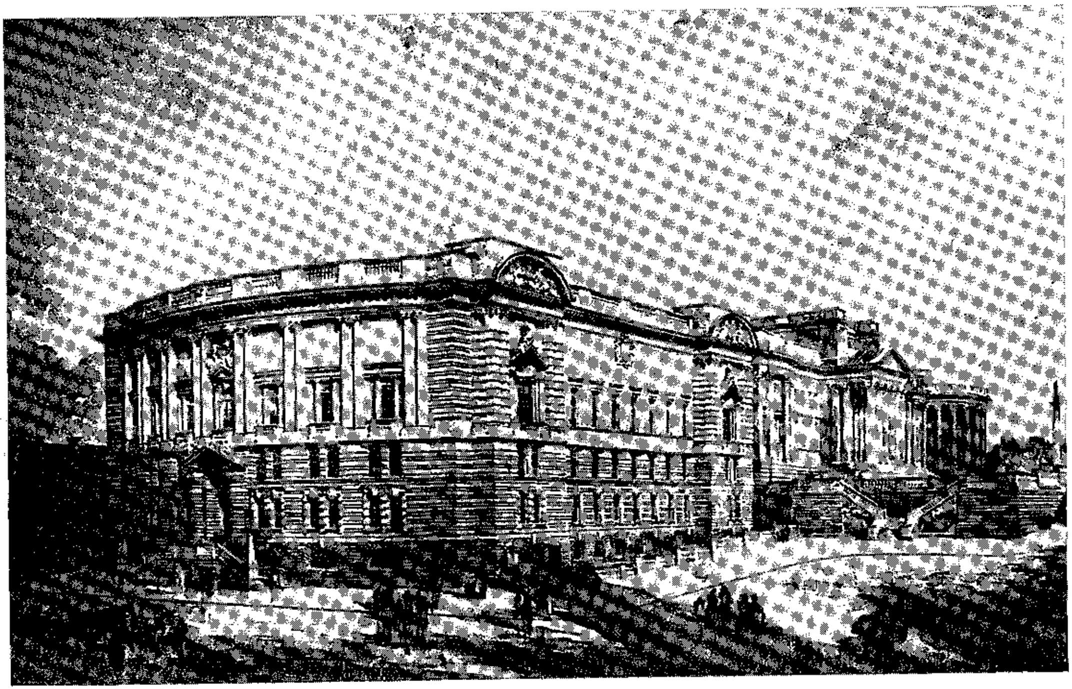

Fig. 4. Architect's drawing for the Museum's extension by E. W. Mountford, Esq., F.R.I.B.A.

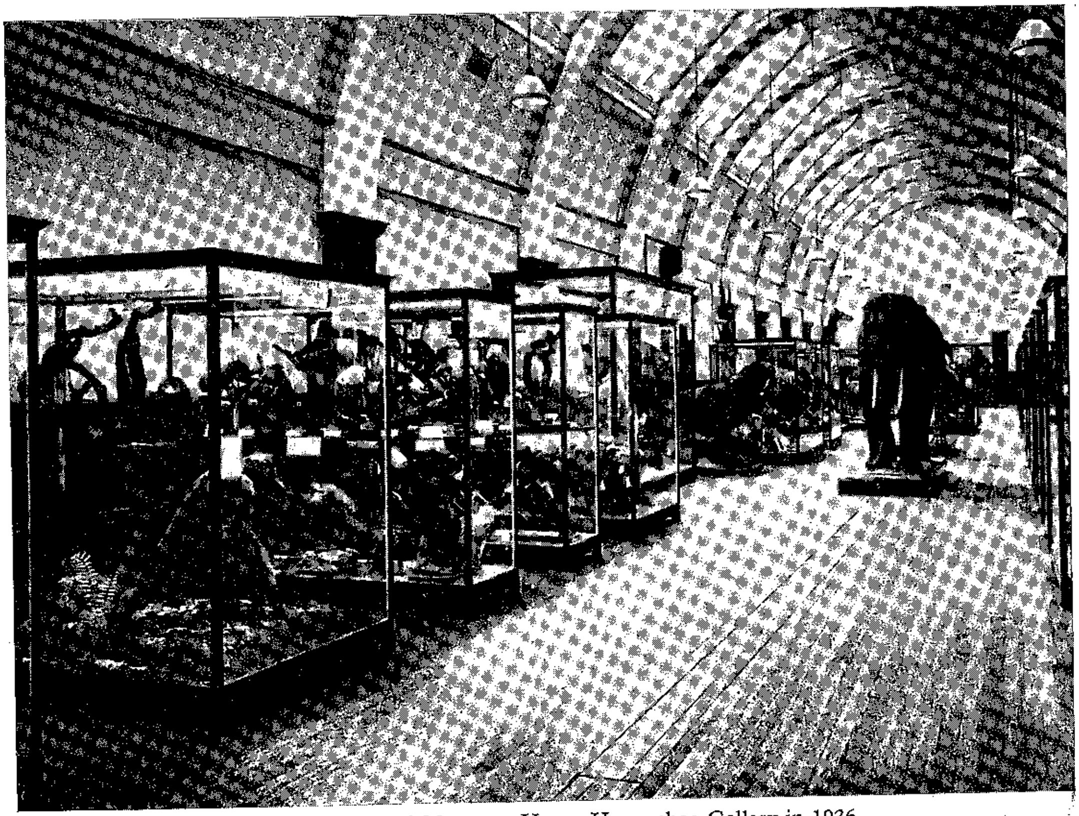

Fig. 5. Liverpool Museum, Upper Horse-shoe Gallery in 1936.

in 1911. Forbes was a clear thinker and a man of energy and decision. He was well known as an ethnologist as well as a zoologist. In 1905 he was appointed Reader in Ethnography to the University of Liverpool.

At the time of Forbes' appointment it was obvious that increased space to show the exhibits was urgently needed. A special sub-committee was therefore constituted in December ~~1894,~~ to take immediate steps to provide for the extension of the Museum, and for suitable accommodation for the Liverpool School of Science, Technology and Art. Mr. Austin Taylor, M.A., was the first chairman of this sub-committee, being succeeded by Mr. M. H. Maxwell. Designs with estimates for a building were invited from a list of eminent architects and in the summer of 1896 those of E. W. Mountford, Esq., F.R.I.B.A., were accepted (Fig. 4). A tender for the work by Messrs. Henshaw was approved by the City Council on October 7th, 1897. The foundation stone was laid by Sir W. B. Forwood, for many years chairman of the Libraries, Museums and Art Galleries Committee, on July 1st, 1898.

Plans for the exhibition of the specimens were carefully considered. Dr. Forbes drew up a report on the subject in 1894 and amplified it in 1901. He stated in 1894 that in all the rooms in which vertebrate animals were exhibited and especially in the mammal galleries the specimens were so crowded together that proper exhibition was impossible. Further the enormous acquisitions had led to a position where in every gallery in which it was possible to conceal them there were cases stacked with specimens. Every subterranean passage was lined with cases and cupboards, and every cellar filled to its utmost capacity. Lack of space had resulted in the specimens on exhibition not being systematically arranged. The invertebrates for example were placed in the centres of the bird rooms. The reptiles and fishes were placed in the midst of the metallurgical and mineralogical collections, and were separated from the birds by invertebrates such as corals and sponges. Allied groups of the animal kingdom were, in fact, owing to the lack of space, situated far from each other.

Forbes then went on to discuss what was needed stating that the public should find the Museum "a book with its pages open and its narrative so clearly set out, that they are unawares following a connected story, unfolded from room to room before their eyes, which may excite their interest and further attention". He added that this "book" should consist of descriptive labels whose illustrations were the specimens to which the labels were attached. In his further remarks made in 1901 he went into more detail stating that the new upper gallery, known as "the upper horse-shoe gallery" (Fig. 5), would be used for a morphological series in which to quote Professor T. H. Huxley "all prominent forms or types of animals or plants, recent or fossil, should be so displayed as to give the public an idea of the vast extent and variety of natural objects". In some of the smaller galleries he would exhibit the main principles of biology, including variation, protective resemblance, geographical distribution and so on. Downstairs were to be shown the local collections.

The interest aroused by the prospective new galleries was considerable. Both the Liverpool Biological Society and the Liverpool Geological Society held meetings in 1901 in which the future policy of the Museum was discussed. Reports of these meetings were sent to the Museums Sub-Committee. Professor W. A. Herdman took a leading part in the discussion at the former meeting. He questioned whether the Committee had consulted experts and demanded more space for exhibits on oceanography and fisheries. While no one really enjoys criticism it is infinitely to be preferred to apathetic acquiescence and these meetings do show the interest taken in the Museum's future at that time.

The *Annual Report* for 1903 gives information on the progress of the work. In the taxidermist's department there had been prepared for display 430 freshly stuffed and mounted mammals and birds, 945 others cleaned, relaxed and partly re-stuffed besides 246 skeletons articulated, repaired or cleaned. In addition over 70 rockwork, sylvan or water scenes had been planned and constructed, besides close on 700 stands for solitary specimens. Apart from building up the new exhibits the removal of what was redundant presented a problem. The number of mammals and birds on display had been so great that two taxidermists were temporarily engaged for the purpose of reducing many of them to cabinet skins. This work continued until 1910 when over 8,000 skins had been dealt with. Another formidable task undertaken was the preparation for exhibition of the elephant presented by Messrs. Barnum and Bailey in 1898, together with its skeleton.

Amongst the most striking features of the new galleries were the habitat groups of British birds on the lower horse-shoe gallery which were the work of Mr. J. W. Cutmore who was later assisted by Mr. R. K. Perry. After his retirement Mr. Cutmore took a part in the execution of a well known series of dioramas at Norwich Museum. The use of habitat groups for birds had begun in Liverpool as early as 1865 when a group of the Coot set up in the Museum had been shown at the British Association's meeting at Birmingham.

The new galleries were opened on the evening of October 19th, 1906, by the Earl of Derby, K.G., in the presence of 1,700 guests, the Lord Mayor of Liverpool presiding. The guests were received by Sir W. B. Forwood (Chairman of the Libraries, Museums, and Arts Committee) and Lady Forwood in the Art Gallery and a procession, preceded by the Corporation Regalia, passed through the new galleries to a platform erected in the lower gallery. Dr. Permewan (Chairman of the Museums Sub-Committee) told the guests that the Museum had recently been described by Dr. Meyer, Director of Dresden Museum, as "next to London, the most comprehensive, and in all respects one of the best in Great Britain". Dr. Permewan added "but indeed, you have only to look around you; *si monumentum requiris, circumspice*". After speaking of the aims of a great Museum he added that the building begun in 1898 was not finished. He hoped that it never would be finished. A finished Museum was a dead Museum. He trusted that the Museum would never cease to grow but would continue year by year to afford better means of recreation to the people of the city and to obtain closer co-operation with those striving to improve the education of the people and to extend the bounds of knowledge. Subsequently an address contained in a silver casket was presented to Lord Derby, who then formally declared the new galleries open. In the course of his speech he referred to the long personal connection of the House of Stanley with Liverpool and in particular with the natural history collections of the Museum.

The extension of the Museum's galleries was the most notable event in the period under consideration but others merit mention. One of these was the joint expedition with the British Museum (Natural History) to the Islands of Sokotra and Abd-el-Kuri. The personnel included Forbes and Cutmore from Liverpool and Mr. W. R. Ogilvie-Grant from the British Museum. The party left England in October 1898 and returned in March 1899. The results of the expedition were published in a special *Bulletin of the Liverpool Museums* containing over 600 pages of text and many coloured plates by well known artists. The volume begins with a narrative of the journey by Forbes, and subsequently the various groups of animals and plants are dealt with by specialists.

Three *Bulletins of the Liverpool Museums*, Volumes 1—3[4] were published in addition to the Sokotran Bulletin. Although smaller these were produced in the same sumptuous manner with fine coloured plates. Unfortunately this Bulletin did not continue presumably owing to the expense. These volumes contained a catalogue by Forbes of part of the Museum's magnificent bird collection. This had been greatly strengthened in 1896 by the purchase of the collection made by Canon H. B. Tristram, D.D., F.R.S. The Tristram collection contained more than 20,000 specimens of which over 150 were types.

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[4] Volume 3 was not completed. It may be noted that the Museum had also published (between 1877 and 1891) five *Museum Reports* dealing with research. These were distinct from the *Annual Reports*. For details see *Bulletin of the Liverpool Museums* No. 1, p. 3.

It is evident that Forbes fully realised the value of the specialised collections in the Museum and the importance of research. The task of preparing and arranging the specimens in the new exhibition galleries must, however, have taken up a great deal of the staff's time, leaving less than could have been wished for dealing with the huge reserve collections. Further, no proper storage accommodation had been included for such collections when the Museum was built, nor had it ever been possible to catalogue the large intake of specimens as fully as could be desired.

Forbes wrote a report to the Committee on the state of the collections in 1908 and one on the production of catalogues and guides in 1910. A number of guides to the exhibited specimens were subsequently written. They were well produced and well illustrated and had a large sale. It may be observed that the very high attendances previously mentioned continued at Liverpool and the figures were often little below those at the much larger British Museum (Natural History) at South Kensington.

CONCLUSION

We have now traced in outline the history of those collections which we may term the Derby Museum down to the year 1911. We have seen how, when T. J. Moore was Director, large collections were amassed and much pioneer work carried out. We have then described how the enlargement of the Museum, permitting the far better display of the specimens, was carried out under the Directorship of Dr. H. O. Forbes. It is not intended to deal with the period beyond 1911. We may, however, say that from 1911 until 1941, when the Museum was bombed, the keynote was the embracing of further fields of study. Much more attention than formerly was given to geology and botany while although outside our main theme the magnificent ethnological and shipping collections demand notice.

There is sometimes a tendency to talk of "modern museum methods" as though nothing worth while had been done in the past. The writer hopes that this article has shown how ill-informed is such an attitude. It indicates not only lack of an historical sense but lack of a sense of justice to our predecessors. The study of the past history of our City Museums provides both inspiration and a challenge to present workers.

BIBLIOGRAPHY

Booklet by T. J. Moore for members of the mercantile marine. Printed separately and in *Proceedings of the Literary and Philosophical Society of Liverpool*, Vol. 16 (appendix) 1862.

A descriptive guide to the Liverpool Free Public Museum 1869 (no author mentioned).

Derby Collection of Natural History—Keeper's half-yearly Reports to the Trustees by T. J. Moore 1876—1891.

Museums and Art Galleries by Thomas Greenwood, F.R.G.S., 1888.

Museums of the past, the present, and the future, particularly those of Liverpool by G. H. Morton, F.G.S. (Presidential Address for 1893 in *Proceedings of the Liverpool Naturalists Field Club* (1894)).

Bulletin of the Liverpool Museums. Edited by H. O. Forbes. Vol. 1 1898, Vol. 2 1900, Vol. 3 (incomplete—No. 1 1900, No. 2 1901).

The Natural History of Sokotra and Abd-el-Kuri. Edited by H. O. Forbes, LL.D. (A special *Bulletin of the Liverpool Museums*, 1903).

A general guide to the collections contained in the Free Public Museums, Liverpool by H. O. Forbes, LL.D. 1906.

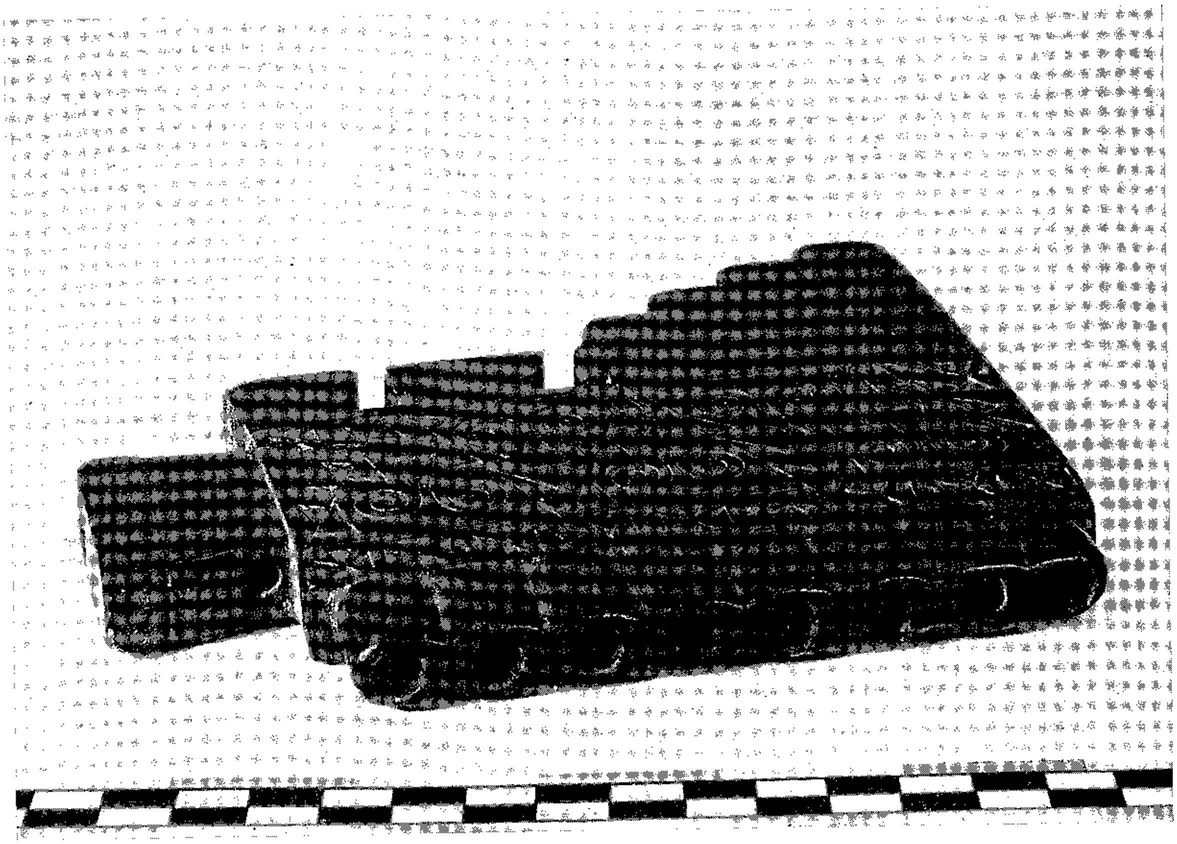
Some Geological Collections in the Liverpool Public Museum by Stella West Harris, M.SC. (*Proceedings of Liverpool Geological Society*. Vol. XIV. Part ii 1925, pp. 181—95.)

Obituary notices: T. J. Moore—*Liverpool Daily Post*, November 2nd, 1892. H. O. Forbes—*Ibis* 13th series Vol. 3, 1933 pp. 135—6. J. W. Cutmore—*North Western Naturalist*, Vol. 17, December 1942, p. 398. C. T. Gatty—*The Times*, June 9th, 1928.

Articles on the Rev. H. H. Higgins and Mr. F. P. Marrat by W. K. Ford, M.SC., occur in the *Liverpool Libraries, Museums and Arts Committee Bulletin*, Vol. 2, Nos. 1 and 2 (1952), and No. 3 (1953) respectively. These list a number of other works dealing with the Museum which are not included above.

The Liverpool Royal Institution—A record and a retrospect by H. A. Ormerod, M.A., 1953.

Notes on the collections in the Department of Invertebrate Zoology at the City of Liverpool Public Museums by W. K. Ford, M.SC. (*North Western Naturalist*, Vol. 25, June 1954, pp. 191—203).



The Rawdon Syrinx. Liverpool Public Museums

THE RAWDON SYRINX
(PAN-PIPES)

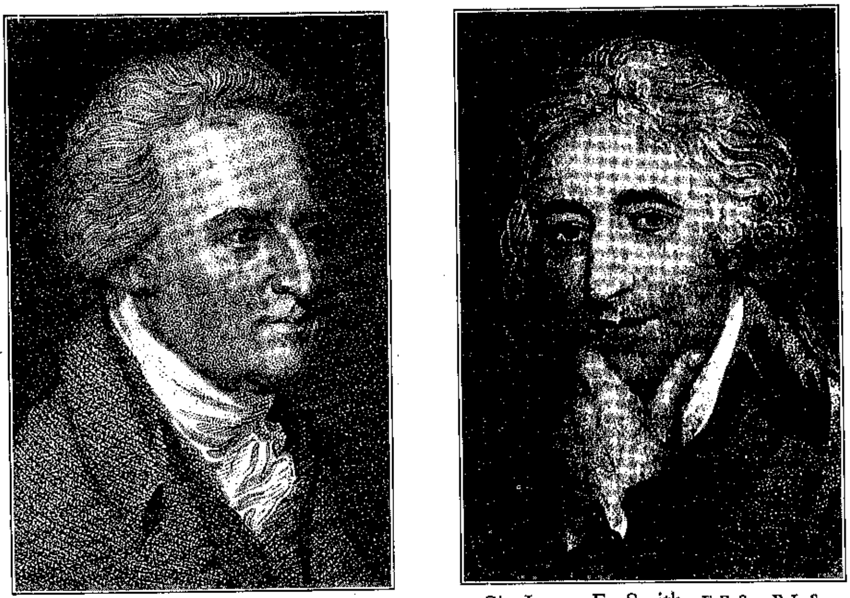
The Liverpool Museums possess an unusually fine collection of Central and South American antiquities, and while much was destroyed or damaged in the War, the most important specimens such as the Pre-Conquest gold jewellery and the Mayer-Fejérváry Mexican Codex were preserved. To this collection the Museums have now added an unusual musical instrument, a syrinx or set of Pan-pipes of carved stone, recently purchased from Major C. H. Rawdon.

The Rawdon Syrinx is a fine instrument of eight pipes, carved out of blue-veined steatite and covered with a dark brown patina. It was discovered in a Peruvian *huaca* or grave mound, lying on the body of a mummy, and obtained by General Paroissien 'as an article of value and great rarity'. In 1820 Paroissien gave it to Joshua Rawdon; at some date plaster casts were made from it and were put on show in several Museums, while the original was lost sight of by archaeologists. The original, however, was being safely kept by the Rawdon family until this year, when Major Rawdon sold it to Liverpool Museum.

Paroissien unfortunately did not record the place where the syrinx was found, though it is usually thought to be in Highland Peru—Cuzco, perhaps. The syrinx is certainly of Inca style, dating some time between A.D. 1300 and 1600, but it may owe a lot to the contemporary cultures in Chile and Argentine, for it is there, among the Atacameno and Diaguita, that stone Pan-pipes (as opposed to clay ones, which are found all down the Peruvian coast) are most common. These, however, can be easily distinguished from the Rawdon syrinx, not only by their quite different appearance but by the fact that they never have more than five pipes.

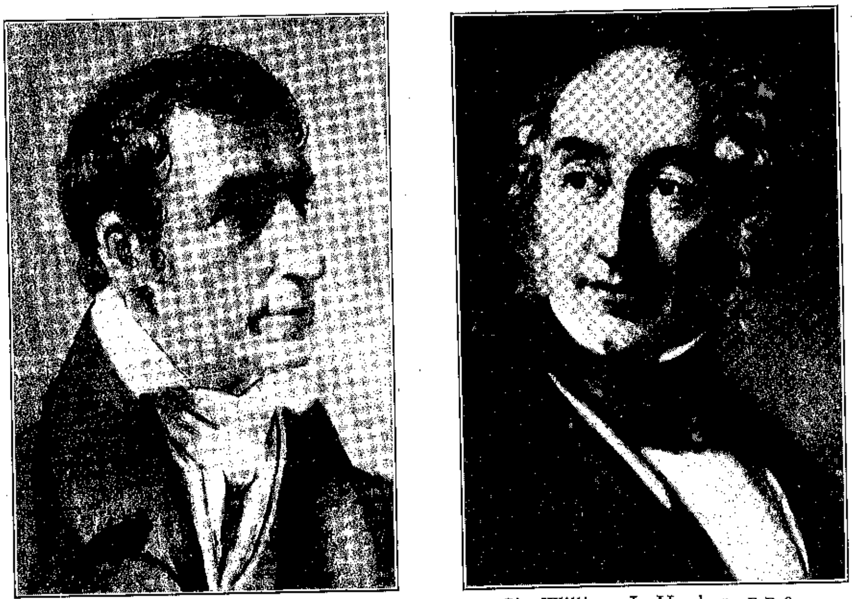
The Rawdon syrinx has one peculiarity shared by another set of Pan-pipes from northern Argentine: there are small lateral stops on four of the pipes which, if left open, prevent the note from being sounded. When the stops are closed, the pipes sound these notes: E, F sharp, G, A sharp, E, C sharp, F sharp, A sharp, in an ascending series—except, that is, for the sixth note. This succession of notes seems very erratic; but the syrinx was perhaps tuned by pouring a little water into the pipes, as required. The sound, at any rate, is loud, full, and not disagreeable.

FRANCIS HUXLEY



William Roscoe, F.L.S.

Sir James E. Smith, F.R.S., P.L.S.



Dr. Nathaniel Wallich, F.R.S.

Sir William J. Hooker, F.R.S.

Fig. 1. William Roscoe and his botanical associates

WILLIAM ROSCOE, BOTANIST

H. STANSFIELD

In the mountains, at 9,000 feet, in North Western Himalaya and Nepal, grow plants of a small distinguished group, the Roscoeas. *They have raised their flowers to the eternal heights for countless ages; they will repeat their life-rhythms for—who knows!—long beyond the span of humans on Earth. The memorials of men to their illustrious kin, created in statuary or paintings will crumble and fade; the Roscoeas will persist, and each season, in freshness and brightness perpetuate the memory of a remarkable Liverpool gentleman—William Roscoe.*

Little has been recorded of Roscoe's interest in the science of botany, beyond the statement that among his achievements he was a botanist: nothing about his botanical works or papers; his contacts and friendships with the leading scientists of his time, nor of his influence in introducing exotic plants into this country (Figs. 1 and 2). Numerous recent enquiries for information on this aspect of his activities have come from Universities in Canada, United States, Australia and Sweden, and these, together with the recent discovery of a small amount of relevant botanical material, have prompted this narrative.

Two hundred years have passed since Roscoe was born, 8th March, 1753, yet, his influence is still keenly active. The foundations which he laid for cultural advances in his native town stand firm. Looking back across the years to those remote days, one sees a small town of about 20,000 people just beginning to find its vocation among the seaports of the world. Commerce was increasing with many countries, and Liverpool sailing ships plied the seven seas. Land was in demand for building, and a steady rise in development in all directions was imminent. The streets of the town were narrow: Castle Street, with its already long history of people, events and affairs, was then the embodiment of the town's character, and since then its centuries of influence have radiated to every corner of the world. In Roscoe's day it was a street of shops, mansions and business houses; a resort of beauty and fashion, and a place "where merchants do congregate". Near the site of old St. George's Church, and on the east side of the street, was the 'Potato Market', and at the junction with Dale Street was the building later occupied by Leyland Clarke and Roscoe, Bankers. The former was frequented by Roscoe as a boy; the latter, after his rise to affluence, was his business house—and also, alas! the venue for his misfortunes.

Seaward, the glinting river, the flutter of sails unfolded, and the constant movement of ships to and from afar. Landward, the undulating breezy hills surrounding the town, where lanes were common with hedges of sweet hawthorn and honeysuckle.

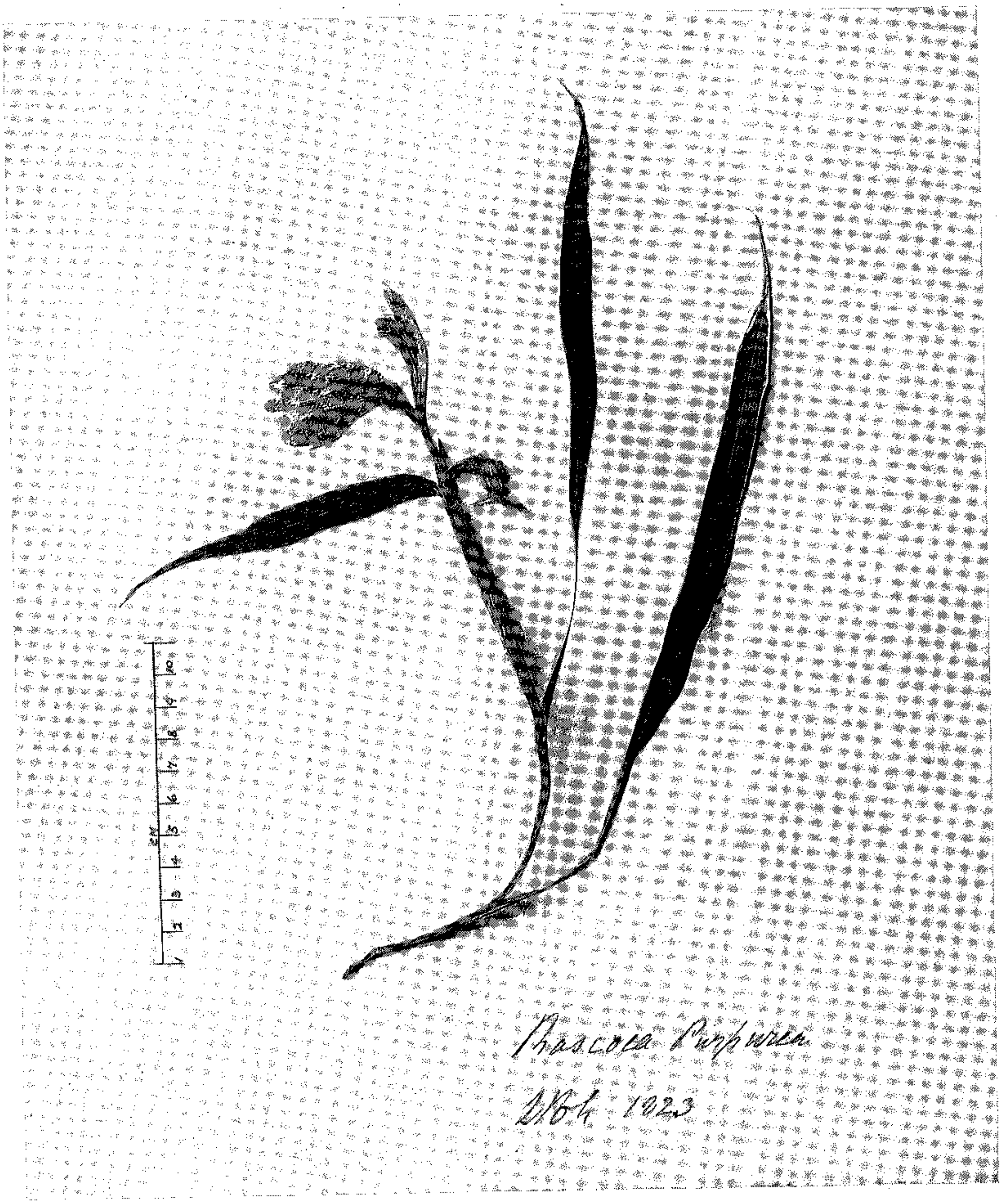


Fig. 2. (2062) *Roscoe purpurea* Sm. First named and described by Sir James E. Smith in honour of William Roscoe. Smith, "Exotic Botany" p. 97, t. 108, Vol. 2. (1805). This plant was grown at the Botanic Garden, Liverpool, and flowered in 1823.

In 1753, the thoroughfare now known as Mount Pleasant was a turnpike road; towards the top of the hill a crooked lane turned southward (Hope Street). At this corner was the 'Old Bowling Green' tavern, noted for its fine 'green' and for its hospitality. The inn-keeper was William Roscoe—and in the March of that year his son—also William Roscoe—was born. At some distance down the hill the inn-keeper tended a market garden of several acres, where he grew vegetables and early potatoes. As a boy, William Roscoe carried the produce of the garden, in baskets on his head, to the Potato Market. From six years old to the age of twelve he attended a day-school in Paradise Street; after school hours he was set tasks to do in the garden, to work and dig, and take a share in the family's activities in earning a livelihood.

In a letter to an old friend, written towards the end of his life, he says:

> "At this period of my life I was of a wild, rambling and unsocial disposition; passing many hours in strolling along the shore of the river Mersey, taking walks alone . . . Having quitted school, and committed my English Grammar to the flames, I now began to assist my father in his agricultural concerns, especially cultivating potatoes for sale, of which he grew several acres a year, produced early in the season and sold at good prices. I was generally intrusted with the disposal of them. In this and other laborious occupations, particularly the care of the garden, in which I took a great pleasure, I passed several years of my life, devoting my hours of relaxation to reading my books. This mode of life gave health and vigour to my body and amusement and instruction to my mind . . . to this day, I well remember the delicious sleep which succeeded my labours, from which I was again called at an early hour. If I were now asked whom I consider to be happiest of the human race, I should answer, those who cultivate the earth by their own hands."

In 1769, at the age of sixteen, he was articled for six years to John Eyes, Jnr., Solicitor, of Liverpool; an event arising from his father's observations of his developing abilities, and his ambitions for him. During these years his private reading went on apace in many directions, leading to a rapid development of faculties of mind, of brilliance and analytical power, tempered with an enthusiasm for ethical values, and an urge to convey to others that which he felt worthy of their contemplation. This was to be especially true in his later thoughts for the spread of cultural knowledge among the citizens of his own town. On a day in 1773, at the age of twenty, he expressed his pride in his native town, as he viewed it from the heights near his home.

"How numerous now her thronging buildings rise!
What varied objects strike the wondering eye!
Where ride yon masts her crowded navies ride,
And the broad rampire checks the beating tide;
Along the beach her spacious streets extend
Her areas open, her spires ascend."

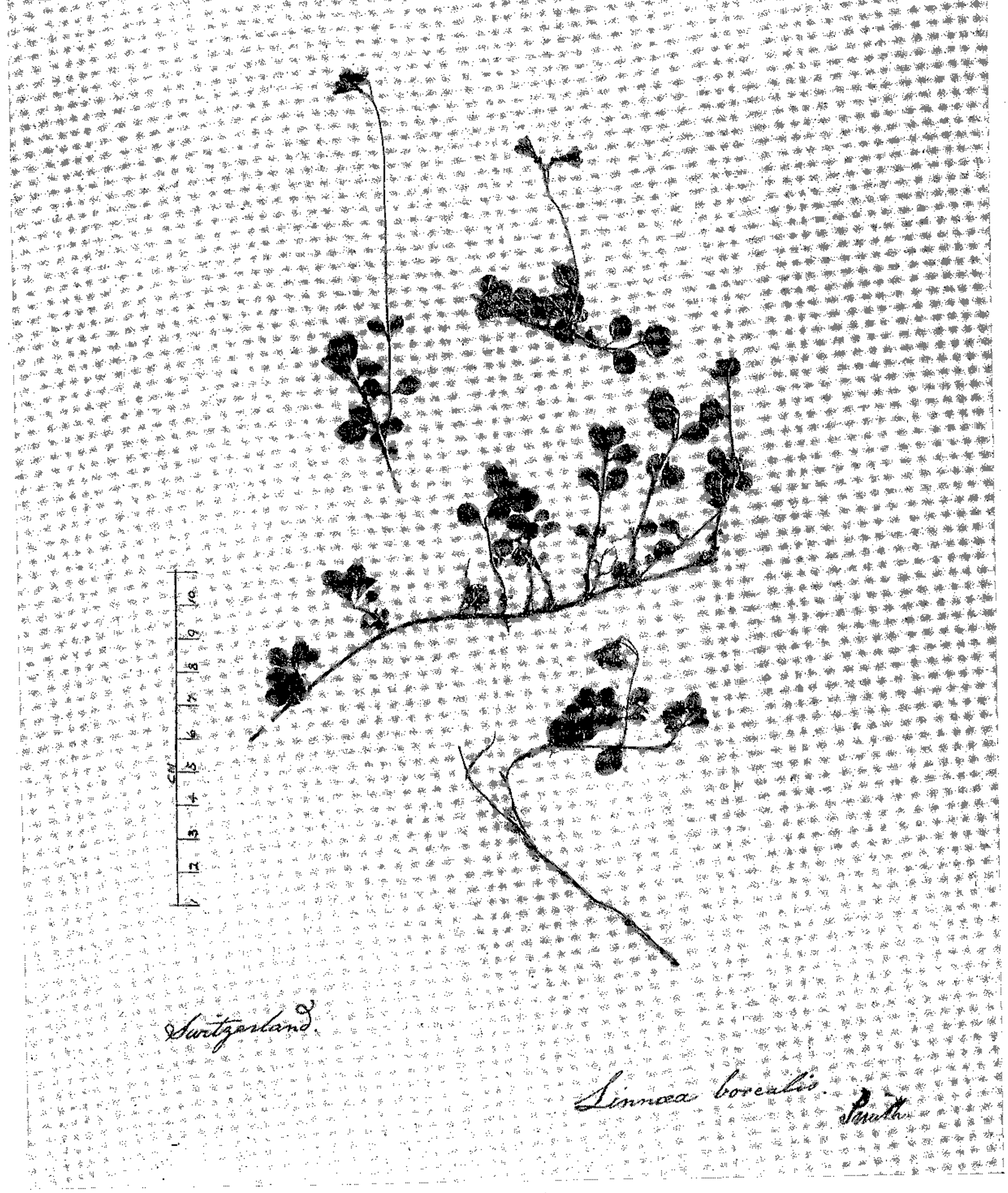


Fig. 3. (4388) *Linnaea borealis* Gronov. Family, Caprifoliaceae. This genus of plants contains but one species, it was named by Gronovius at the desire of Linnaeus, who chose this humble plant to transmit his own name to posterity (Annotator, J. E. Smith.)

His advocacy of worthy causes and his many accomplishments during middle life are well known and recorded in very many places. He was the author of many poems, and his writings include, "Life of Lorenzo de Medici, called Magnificent" 1795; and "The Life and Pontificate of Leo the Tenth", 1805. He was a staunch supporter of measures for the abolition of the African Slave Trade in Liverpool (1788—1824); a National Reformer—his ideals were incorporated in the Reform Bill of 1832. For a brief period he was a Member of Parliament for Liverpool in 1806. He was a founder of The Liverpool Botanic Garden (1802), The Royal Institution (1817), of which he was Chairman (1814—1821) and President (1822); and many other cultural societies. As a collector of paintings, objets d'art, books and manuscripts, he was a connoisseur. As a solicitor he was very successful; as a banker he flourished for a short time—then unhappily misfortune overtook him, and he was again reduced to humble financial circumstances.

(The crash of Clarke and Roscoe, Bankers, was a considerable disaster for many people—the funds of The Royal Institution alone were involved in a loss of £5,000.)

The tempo of his business activities was curtailed, but the power and authority of his influence in intellectual and cultural spheres remained a dynamic force to the end of his life.

Up to 1859, a very pleasant enclosure existed on the north side of Islington, containing three large mansions, entered by a lodge and an avenue from the street. When they were demolished, a foundation tile was found bearing the following inscription in Latin: *William Roscoe/Builder/Commenced, September 1st, 1790/Long let it remain/ Undisturbed by any upset/Unacquainted with cares Knowing no blame/ This is the vow of William Roscoe, the builder.*

Here, Roscoe lived with his wife (née Jane Griffies, married at the Chapel of St. Anne, 22nd February, 1781), and children from 1791—1799. He had now reached a position of affluence, and was a partner in the prosperous firm of solicitors, Aspinwall, Roscoe and Lace. This was a phase of fulfilment, satisfaction and security, and in his leisure hours he applied himself to literary and artistic studies, and, as a complete change to botanical science. He was also acquiring art objects, paintings, books and manuscripts. Previous to this period there is no evidence that he took more than an ordinary interest in plant life, and it would seem only a sudden surge of intellectual activity could account for his quick, intense insight into botanical matters in a brief period.

The traceries of the many patterns which intermingle to produce a picture of Roscoe's botanical achievements are to be found amid the stir of scientific events in the early years of the 18th century. More and more new and strange plants were being discovered in many countries by explorers and collectors; there was no system of plant arrangement which could relate or encompass them. The Swedish botanist, Carolus Linneaus (1707—1778) devised an artificial system which enabled botanists to place all flowering plants in one or other of twenty four classes, according to the number of stamens and styles possessed by the flower (Fig. 3). Those with one stamen fitted into the Class Mon-andriae, those with two stamens into the Class Di-andriae, and so on. The arrangement was expounded by Linneaus in "Systema Naturea" (1735); "Genera Plantarum" (1737); and "Species Plantarum (1735). The introduction of this simple system was an epic event for all botanists, and a source of interest and a "conversation piece" in the salons of society. Collecting plants and "putting them in their place" in the Linnean System became a fascinating pastime which remained in vogue for very many years. Its popularity may be illustrated by a venture to raise funds by a Liverpool printer, George Smith in 1827. He produced a booklet containing 24 coloured plates of British plants, one of each of the 24 classes of Linneaus. The inscription on the title page, was:

> "The first fifty pounds arising from the sale of this work will be given to the Ladies' Society for promoting the early education and improvement of the children of Negroes, and the people of Colour in the British West Indies."

On the continent, the French botanist, Bernard de Juessieu (1699—1777), of the Royal Gardens, Paris, based his studies on the Linnean System, but soon began to make modifications to it, which enabled him to place together, plants truly related to each other. He gradually evolved a Natural System of plant classification. His nephew, Antione Laurent de Jussieu (1748—1836) incorporated the system in "Genera plantarum secundum ordines naturales disposita", 1789. Thus, in Roscoe's day, there were two new systems of plant classification, and in consequence, two schools of thought with advocates for each. Roscoe was one of the champions of Linneaus.

The 18th century was remarkable for its botanical explorations. Juan de Loureio (1715—96) went as a medical missionary to Cochin China. He collected plants which proved to be a most important contribution to the knowledge of the flora of the eastern trans-Gangetic Peninsula and South China. He published "Flora Cochin-chinensis", in 1790. Michel Adanson (1727—1806) was a traveller-naturalist in Senegal, West Africa, in 1747, and the author of "Familles des plantes" in 1763. Sir Joseph Banks (1743—1820) the most extensive traveller of his day; he accompanied Captain Cook on his first voyage round the world in the "Endeavour" (26th August 1768—13th July 1771), and collected plants in South America, Cape Horn, Tahiti, New Zealand, Australia and the Cape of Good Hope. The two Forsters, Johann (the father) and Georg (the son), travelled with Captain Cook on his second voyage round the world (1772—1775) in the "Resolution"; they made extensive collections of plants in New Zealand, Terra del Fuego, and the South Sea Islands. The botanical exploration of India had begun; Dr. Roxburgh (1751—1815), of Calcutta Botanic Garden, was making his famous plant-collecting journeys, which he afterwards described in "Plants of the Coast of Coromandel", 1795—1819. H. A. Van Rheede Tot Drakesteyn (1637—1691), had published "Hortus Indicus Malabaricus" in 12 volumes (1678—1703), and the work of G. E. Rumphius in the Moluccas was published by Johannes Burmann (1707—1780), as "Herbarium Amboinense" in 6 parts (1741—1750). The ease of expression with which Roscoe quotes these authors, leaves no doubt that he had studied their writings; it may be primarily for interest and pleasure, or it may be, probing deeply into the flora of recently explored regions.

The establishment of Botanic Gardens for the cultivation and scientific study of plants began in Italy: Padua (1533); Bologna (1547); then followed Switzerland, Zurich (1560); France, Paris (1570); and Germany, Leipzig (1542). Britain was late in the field; Oxford (1621); Edinburgh (1667); Chelsea (1673), and Kew (1759). It was one of Roscoe's ambitions to establish a Botanic Garden in Liverpool. In 1799, he and a few friends sought to bring the scheme to fruition by raising money by subscription and allotting shares. Roscoe prepared the prospectus, in which he says:

> "the establishment of a Botanic Garden in the neighbourhood of the town is at present a desirable and obtainable object. Even the cultivation of the fine arts, however alluring in its progress must yield to the superiority of the study of nature; for who will venture to compare the productions of the painter and sculptor with the original. It is necessary for the progress of science, that the student should be supplied with actual living specimens. Without public institutions for the purpose of preserving such plants as are imported into the country, and in the acquisition of which so many men of great learning and talents have devoted themselves to long and dangerous voyages and expeditions, there is reason to believe that considerable numbers will be lost to us. The great repositories are at present those nurserymen in London . . . "

The appeal succeeded and a sufficient number of persons became subscribers. The Garden was opened in the summer of 1802, on a triangular plot of ten acres of land, in that part of the City now built upon and bounded by part of Myrtle Street, Melville Place and

Olive Street. It may well have been named The Roscoe Botanic Garden, for its history and fame during the whole of its life-time was stamped with the seal of Roscoe.

In the spring of 1799, Roscoe purchased Allerton Hall and a portion of the estate, and took up residence there. It was a spacious mansion built of freestone in the Grecian style; a fine lawn studded with clumps of trees sloped away from it; the Mersey could be seen, winding, as a broad sheet of water through an expanse of green meadowland, while the Welsh mountains blended with the clouds on the distant horizon. This was Roscoe's favourite residence during prosperous days; a seat of elegant hospitality and literary refinement. Here, he intended to continue writing, and to enjoy the cultivation of his garden, as well as to give more time to the study of botany. Vistas of days of relaxation from business and of contemplation of the enjoyments of the countryside. An inscription placed over an alcove in the garden, is delightful in its brevity, and expansive in its anticipations: "*The healthful gales from wild-flowers fresh that blow.*"

Writing about this period Roscoe said: "It seldom happens that those who have been engaged in the active duties of life retain that taste in retirement which is often felt in youth".

Among the treasures of the library at Allerton, were a choice array of the classics of botanical literature—Antonii Pinoei, "Historia Plantorum", 1567; Prosperi Alpini, "De Plantis Exoticis", 1629; John Gerarde, "Herbal", 1636; John Parkinson, "Theatrum Botanicum", 1640; Joseph P. Tournefort, "Institutiones rei Herbariae", 1700; Caroli Linnaei, "Genus Plantarum", 1778; "Systema Naturae", 1788; "Species Plantarum", 1791; Engleberti Koempferi, "Amoenitates Exoticae", 1712; Olaf Swartz, "Nova genera et species Plantarum", 1788; Joseph Goertneri, "De fructibus et seminibus Plantarum", 1788; And. Joh. Retzii, "Observations Botanicae", 1791; C. L. Willdenow, "Florae Berolinensis Prodromus", 1787; Petri Foskall, "Flora Egyptiacio-Arabica", 1775; Joh. Loureiro, "Flora Cochin-chinensis", 1790; Car. Plumierii, "Plantarum Americarum", 1755; H. Vam Reede, "Hortus Indicus Malabaricus", 1686; Geo. E. Rumphii, "Herbarium Amboinese", 1750; Fusee Aublet, "Historie des Plantes de la Guiane Francoise", 1775; Jacobus Sherrard, "Hortus Elthamensis", 1732; and works by Pallas, Oederi and many others. This was possibly the finest botanical library possessed by a private person at that time.

The grounds at Allerton contained many flowering shrubs which had recently been introduced into the country from the United States and elsewhere, and as they came into flower Roscoe would gather a choice specimen and take it along to the Botanic Garden to be preserved and placed in the herbarium. We still have many of these specimens:*

(8189) *Ilex glabra* (*Prinos glabra*) the Inkberry, of the family Aquifoliaceae. (The Holly family).

A shrub with glossy small leaves and black berries; a native of Eastern United States.
"Gathered in the grounds of Allerton Hall, by William Roscoe, July 1815."

(8069) *Polygala Chamaebuxus*, of the family Polygalaceae (Milkwort) (Fig. 4).

A small shrubby evergreen rock-plant, with yellow pea-like flowers From the Alps of Central Europe.
"Gathered in the grounds of Allerton Hall, by William Roscoe, May 1816."

(2508) *Leucothoe racemosa* (*Andromeda paniculata*) of the family Ericaceae (Heaths).

A bushy shrub with nodding spikes of white flowers. From North America.
"Gathered in the grounds of Allerton Hall, by William Roscoe, June 1816."

Alas! for his dreams of leisure; in less than a year he plunged further than ever into the vortex of business, becoming a partner in the Banking House of Leyland, Clarke and Roscoe, afterwards Clarke and Roscoe, Castle Street. His loyalties to his former hopes still lingered, for he said: "*Must I for ever hereafter open no books but journals and ledgers, and breathe no air but that of the town.*"

Roscoe had appointed John Shepherd as Curator of the Botanic Garden; a man with a rare combination of practical horticultural knowledge as well as the scientific aspects of botany. Together they quickly began to obtain plants, roots and seeds, from other Botanic Gardens at home and abroad; from the larger private gardens, and from the large Nurseries in and about London. They also enlisted the help of travellers and ships' captains to bring back plants from overseas. A large correspondence ensued between Roscoe and the people who could be of assistance. One of the first of his botanical correspondents was James Edward Smith (afterwards Sir), who was then President of The Linnean Society of London. Sir James E. Smith, M.D., F.R.S., P.L.S. (1759–1828), was a Norwich man of ample means, a medical doctor by profession, and a botanist by choice. He was the foremost botanist of his time, and the author of very many works; the best known are "English Botany" by Smith and Sowerby, 36 Vols. (1790–1814); and "Exotic Botany" (1814–1815). It was Smith who purchased the entire collections of Linneaus for 900 guineas.

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* Numbers in brackets refer to the number of the specimen now in the Herbarium of the City Museums.

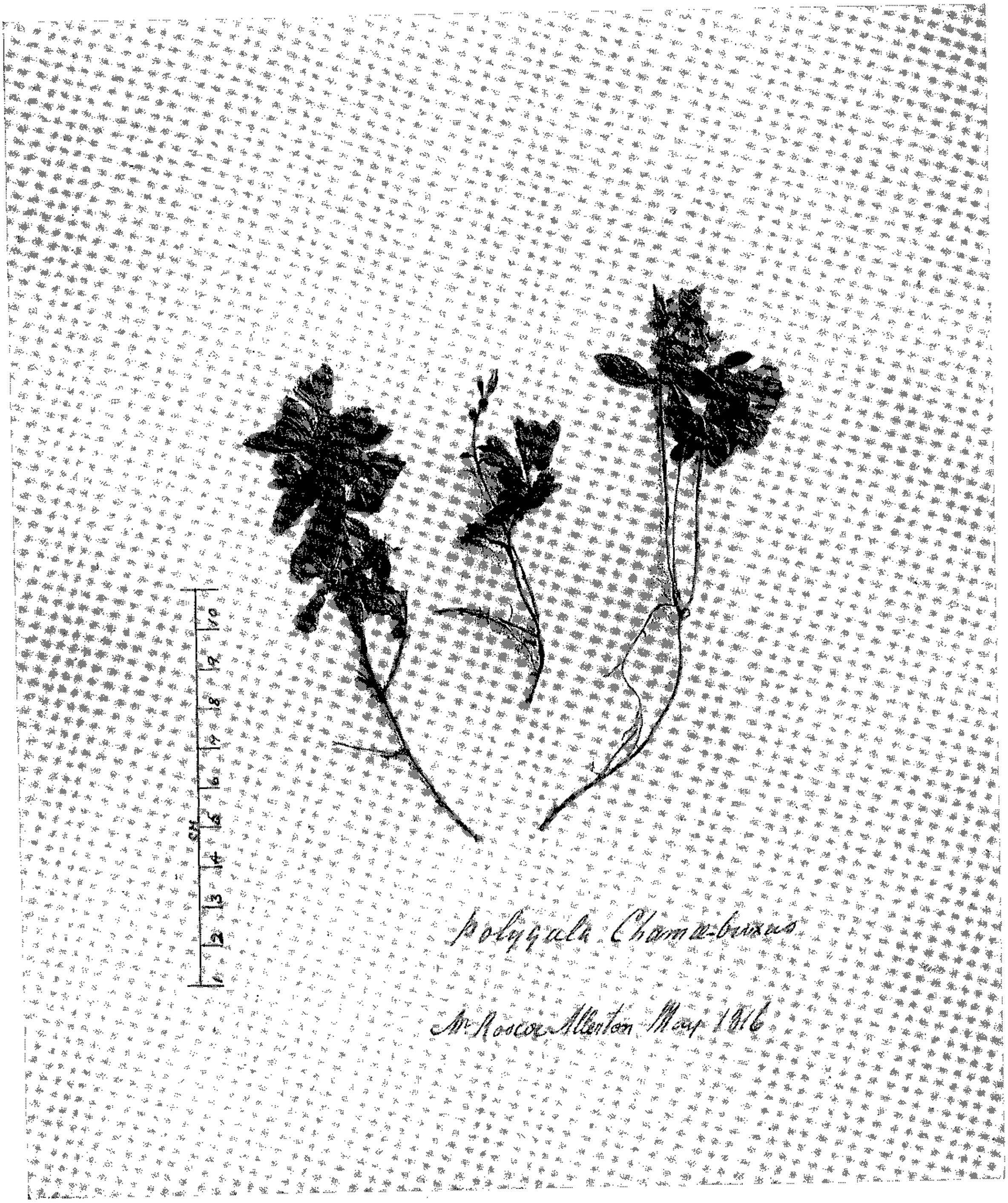

Fig. 4. (8069) *Polygala Chamaebuxus* L. Family, Polygalaceae. Native of Alps of Central Europe. Collected by William Roscoe from his garden at Allerton Hall in May 1816.

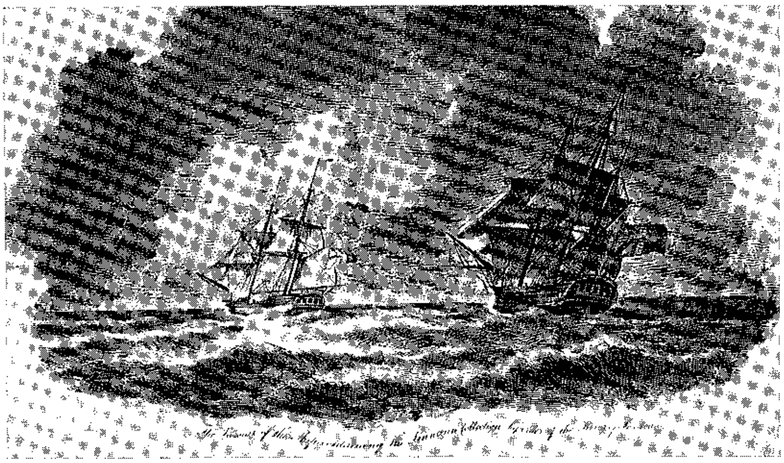

Fig. 5. The pursuit of the S.S. "Appearance" containing the Linnean Collections, by a Swedish armed frigate. (Published by Dr. Thornton, 25th March 1800.)

When the Swedish Government heard of this, they threatened to (Fig. 5) oppose the removal of the 26 large cases containing the collections at Upsala; they were, however, successfully placed on board the English brig "Appearance", which sailed. A Swedish armed frigate gave chase, but was unable to overtake the ship bearing the precious cargo to London. With these collections, Smith founded the Linnean Society of London on the 26th February 1788. From 1795–1805 the Society occupied No. 10 Panton Square—an area now occupied by Lyons' Corner House in Coventry Street.

Soon after the Liverpool Botanic Garden opened, Smith visited it, and delivered a few lectures to the proprietors, and also discussed with Roscoe the desirability of forming a worthy herbarium (following the plan of the famous botanic gardens in Europe); he also suggested that John Shepherd should visit the larger nurseries in London.

In the 'Smith Correspondence' at The Linnean Society of London, there is the first letter between Roscoe and Smith—the beginning of a life-long friendship between them.

(LIN. 17–1)[1] June 23rd 1803. Roscoe to Smith.

. . . indicates that he is planning another course of lectures on botany to be delivered in Liverpool by Smith.

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[1] The letter LIN. plus a number, in brackets, refers to letters preserved at The Linnean Society of London.

(LIN. 17–5) 25th August 1803. Smith to Roscoe.

. . . sends his appreciation of his visit to Liverpool . . . and tells of John Shepherd's experiences in London.

The first botanical letter in the Liverpool Roscoe Correspondence is:

LIV (4451)[1] 7th February 1804. Smith to Roscoe.

"I go to London on the 10th April to give a botanical course at the Royal Institution of 10 lectures . . . pray remember us very kindly to the 'good Shepherd' . . . he is literally a good shepherd to his flock."

It was necessary for election to the Fellowship of the Linnean Society of London, to be nominated by a number of Fellows. Roscoe was nominated, 1st November 1803.

He was received and elected F.L.S. on the 17th January 1804, at 10 Panton Square, and signed the Roll. His signature is still preserved.

He had journeyed to London for this event, in mid-winter, at a time when transport by Coach was the only means of travel; four coaches a day left Liverpool for London starting either from Crown Inn, Red Cross Street; Coach and Horses, Whitechapel; or the Angel, Dale Street. He stayed some days and frequently saw Sir James Smith and Lady Smith. He was also introduced to Sir Joseph Banks, who invited him to dine at the Royal Society. Sir Joseph Banks was President of the Royal Society for a great many years, a man of high attainments and social importance—his magnificent presence dominated the botanical scene of his generation. (At Liverpool there are ten letters, LIV (174–183) between Roscoe and Banks; strangely enough, they do not deal with botanical matters, but with agriculture.)

The development of the Botanic Garden went on apace. The (Fig. 6) conservatories were 240 feet in length, the centre span was 24 feet in height. They were divided into five sections, capable of being heated to different degrees of temperature, and adapted to grow plants from any part of the world. By 1808, the number of kinds of plants, shrubs, and trees, grown in the establishment was 1,046. The plants with which we are chiefly concerned were grown in the 'stove' (the warmest of the conservatories); they numbered 461 kinds.

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[1] The letters LIV. outside a bracket, refers to the letter, in correspondence housed in the Liverpool Reference Library.

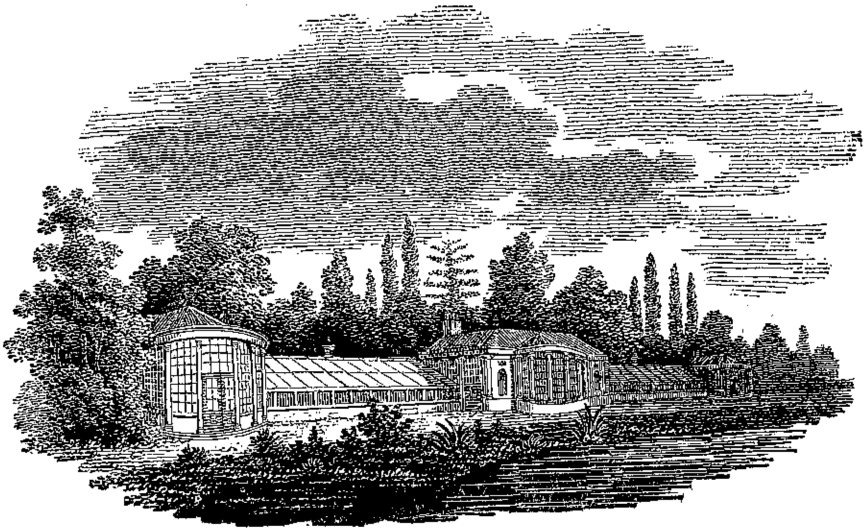


Fig. 6. The Conservatory of the Liverpool Botanic Garden 1805.

Special social functions were arranged at the Garden, and they were attended by the élite of the town. On summer evenings the proprietors, their families and friends, took strolls round the grounds admiring the flowers, or through the conservatories to see the first blooms of some rare orchid from the far away tropics. The quiet strains of music—provided by a band—mingled with the soft tones of voices of the ladies, or the deeper tones of the gentlemen holding forth in high praise of the state of the gardens; occasions of dignity, old world courtesies and refined satisfactions. In the conservatories, throughout the year, there was a succession of blossoms, as well as specimens of ornamental and economic plants, among them: Arabian Jasmine, Pepper, Papyrus, Sugar-cane, Cinchona, Coffee, Mango, Strelitzia, Gardenias, Asclepias, Guava, Pomegranate, Caper-tree, Custard Apple, Gloxinias, Tamarinds, Cotton, Hibiscus, Coral-tree, Vanilla, Crotons, Papaw-tree, Banana, Figs, Mimosa, Cycas, and very many Orchids. There were also many plants of the family Scitamineae, among them, *Hedychium coronarium* Koeng—the sweet-scented garland flower, a plant growing wild on the borders of mountainous fields in Upper Nepal; *Alpinia nutans* Ros.—a plant introduced into Europe in 1792; *Globba marantia L*, which had been sent from Bengal by William Roxburgh, five species of *Canna* (Indian Shot); three species of *Zingiber* (ginger); three species of *Kaempferia* (galangale), and many more. This family of plants had a strange fascination for Roscoe; the flowers are more quaint than beautiful; they have a certain 'stiffness' yet dignity, and all conform to a set pattern or design. He became intensely interested in them, almost to the exclusion of any others. He studied them all as they came into flower, and delved into the literature about them, as set forth by the earlier botanists. His botanical studies for the rest of his life were devoted to these plants "every man has his own pleasures."

LIV. (4457) 14th November 1805. Smith to Roscoe.

"I write now chiefly to beg you will as soon as possible send me your paper on Scitamineae in some form or other. I much want it to be in our 8th Volume (Trans. Linn. Society). What I want most is, to be able to publish several of that order (family) of which I have drawings for "Exotic Botany" as soon as possible, before other people get them. Now, when your paper has been read at the Society, I may refer to it and quote your principles. You had best draw it up (advice and caution) as an essay on the genera of the plants, fixing them (genera) only for the present. You can afterwards give a more ample account of species in another paper if you please . . ."

(LIN. 17–60) 1st March 1806. Roscoe to Smith.

. . . sends draft of his paper to Smith.

(LIN. 17–62) 2nd April 1806. Smith to Roscoe.

. . . letter contains detailed remarks on Roscoe's manuscript . . .

On the 15th April and 6th May 1806, Roscoe journeyed to London to read Part 1 and Part 2 of the manuscript. They were published as one paper, in full, in the Transactions of the Linnean Society, pp. 330–357, Vol. 8, 1807, entitled "A new arrangement of Plants of the Monandrian Class usually called Scitamineae" by William Roscoe, Esqr., M.P., F.L.S.

The Scitamenta of the ancients were savoury and well-spiced viands; the elegant delicacies of the tables of those times. Linneaus applied a kindred word—Scitamineae—to denominate a group of plants, the products of which yield condiments, e.g. ginger, cardamons.

Roscoe's article contains the history and a general account of the plants; an analytical table of genera; a page drawing of the diagnostic features of the flowers, and a detailed statement of the known species of each genus.

"The Scitaminean plants, so called on account of their aromatic or spicy qualities . . . natives of warm climates, found in moist situations. The chief of them have been discovered in the East Indies . . . The descriptions of them given by Linneaus could only have been formed on the labours of preceding botanists; the figures of Van Rheede, Rumphius and others . . . About the year 1783, a very considerable addition was made by the labours of Koenig; who in his researches through various parts of the East, discovered many plants of which he communicated full descriptions to his friend Retzius, who published them in the third fasciculus of his "Observationes Botanicae" . . . From the result of observations made of this subject for some years past (at the Botanic Garden) I have been led to conclude that the true generic character of these plants consists in the situation, form and appendages of the anthera (stamen) and its petal-like or incrassated filament . . ."

Of the 53 species named in the article, 23 of them had been studied from actual living plants growing and flowering in the 'stove' at the Botanic Garden. The remainder are from figures in the works of Gaertner, Dillenius, Martyn, Jacquin, Plumier, Reede, Willdenhow, Rhumphius, Retzius and others.

The publication of this article gave Roscoe a position of importance in botanical circles in London.

When Sir James E. Smith published the classical work "Exotic Botany" 2 Vols. 1804–1805, he dedicated it to William Roscoe:

"Dear Sir, When in your delightful retirement at Allerton, I felt transported to the Villa of your own Lorenzo, I was agreeably surprised to find how large a portion of your attention scientific botany had shared amid your devotion to the Historic Muse. Let me thus remind you of that time, so grateful to my recollection, and which, if I may judge by subsequent transactions you do not wish to forget. Long have I been anxious to know the Historian of the Medici, but now wish far more to preserve the regard of a Roscoe. Your obliged and affectionate friend, J.E.S. December 1st 1804."

"Exotic Botany" contains descriptions of 120 plants, illustrated by 120 coloured plates. The descriptions are by Smith; the figures by James Sowerby. After the publication of the work, Smith presented Roscoe with an entire set of duplicates. Eighty-three of the plants described were TYPE specimens—the duplicates were Isotypes. We have still 43 of these specimens in the Herbarium (Figs. 7 and 8). The plants are handsomely mounted and annotated by Smith; many are of great interest:

(5181) *Humea elegans* Sm. Family Compositae. Exot. Bot. Vol. I. t. I (1804).

"specimens of this elegant plant have long since been sent to England from Port Jackson, New South Wales, but its appearance was so new that no Botanist could determine its genus. Its proper class in the Linnean System was not suspected till the summer of 1804, when Lady Hume had several plants blossom at Wormleybury, Herts., from seeds given her by Sir Joseph Banks. We have named it after the accomplished lady to whom we are obliged for its introduction."

(8854) *Melaleuca thymifolia* Sm. Family Myrtaceae. Exot. Bot. Vol. I. t. 36 (1804).

"it is a native of New South Wales and was raised from seed by Mr. Fairbairn of Chelsea. I find it necessary to claim my original name for this plant, which has twice been changed without reference to Trans. Linn. Society. Vol 3, p 278 (1797) where it was first published."

(1678a) *Roxburghia viridiflora* Sm. Family Stemonaceae. Exot. Bot. Vol. I. t. 57 (1804).

"Roots of this singular plant were sent by Dr. Roxburgh (India) to Lady Hume from the coast of Coromandel. Being cultivated in a 'stove', they flowered last April (1803) for the first time in Europe.

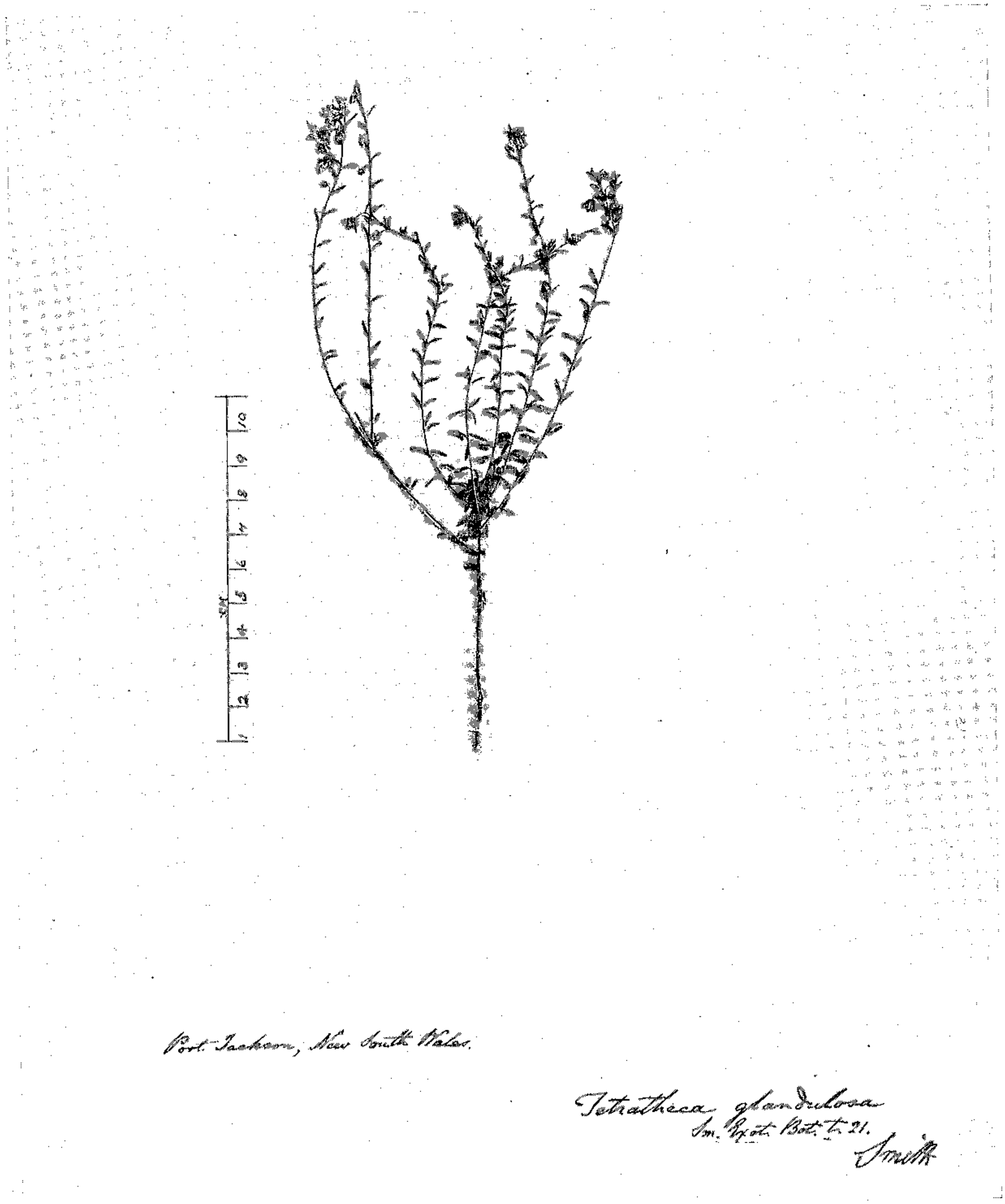


Fig. 7. (8052) *Tetratheca glandulosa* Sm. Family, Tremandraceae. Smith, "Exotic Botany" Vol. 1, t. 21 (1804). Isotype. " . . . root woody, probably perennial for some of our specimens have evidently been burnt to the ground by fires made by the savages of New South Wales . . . " (Annotator, J. E. Smith.)

(2061) *Roscoea purpurea* Sm. Family Scitamineae. Exot. Bot. Vol. 2 t. 108 (1805).

This plant is the Hatucon of the Nawaas. Finding in Dr. Francis Buchanan's collection a drawing and specimens of this new genus, I cannot but dedicate the genus to Mr. Roscoe whose attention has been so peculiarly devoted to this order and who has thrown so much light upon it. We are acquainted with but one species, a native of the mountains of Upper Nepal. This plant was found at Narainhetty, flowering in April, 1802.

(7412) *Erythrina Crista-galli. L.* Family Leguminoseae. Exot Bot. Vol. 2 t. 95 (1805).

Although this plant was named by Linneaus long ago, the specimen we have is of local interest—"For this splendid plant we are obliged to our worthy friend John Shepherd, Curator of Botanic Gardens, Liverpool, by whose skill and exertions alone that extensive collection could have, so soon, been brought to its present perfection. Mr. Shepherd raised this plant from East Indian seed in 1802 . . . It is kept in the 'stove' and flowered in the summer of 1805. The plant is now six feet high."

Another of Roscoe's schemes for the Botanic Garden, was, that it should possess a first class herbarium (reference collection of preserved plant specimens). He had purchased for himself, the herbarium of Johann Reinhold Forster (after his death) from the University of Halle; subsequently he presented it to the Botanic Garden. These plants were collected during Captain Cook's second voyage round the world (1772–1775). Roscoe also arranged with Sir James E. Smith for duplicate plants from his own private collections and from those at the Linnean Society.

LIV. (4458) 30th August 1806. Smith to Roscoe.

"I think of sending you in a month or six weeks the first livraison for your Liverpool Herbarium consisting of 2,000 specimens. It will serve to show you my plan and you may judge whether such a collection which I would engage to make up to 10,000 at least would be worth being lodged at the Botanic Garden, to serve as a Linnean Herbarium of authority for reference . . . I hope you have written to the good Lord Seaforth as you promised. I want to know what plants he sent you . . ."

These plants, and many more arrived in Liverpool. Each plant was selected and annotated by Smith himself. The word 'Smith' on each of the sheets was added by John Shepherd as they were received at Liverpool. There is in the Linnean Society library (Ref. J.E.S. Corr. Sect. 5. No. 2) a stationer's notebook of about 100 leaves, parchment covers; 61 pages are written upon and contain a long list of the herbarium specimens sent by Smith to Roscoe. We have in the City Museums, 2,672 of these specimens in excellent condition, they include Plants by Villars, who published the classical "Historie des plants de Dauphine", 4 Vols. 1786–1789: e.g. (8471) *Hypericum hyssopifolium.* Figured and described pp. 505, t. 44, Vol. 3.

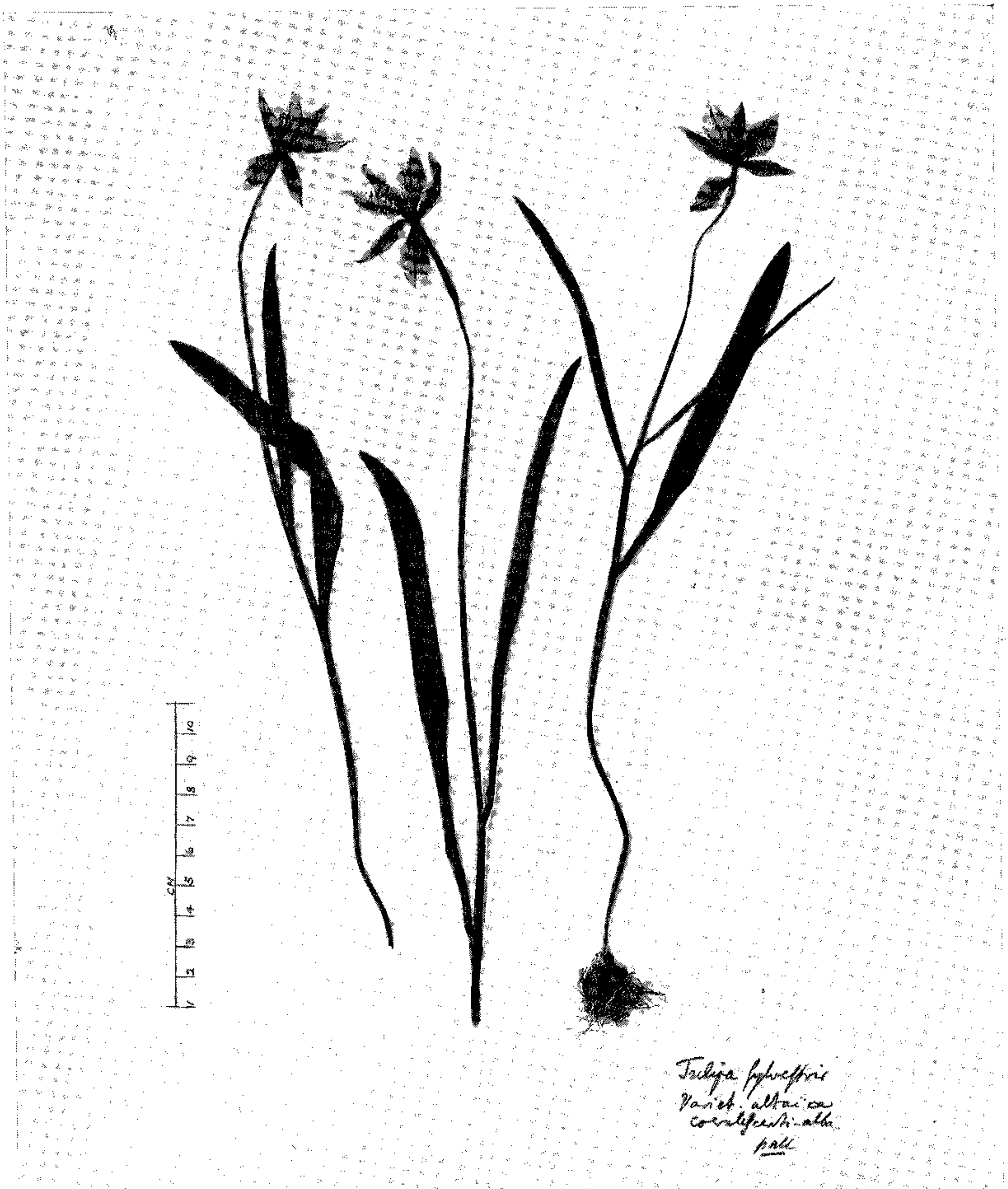


Fig. 8. (1893) Example of the plant specimens collected by famous botanists and sent to Roscoe by Smith. *Tulipa sylvestris*. Pall. Family, Liliaceae. From the Steppes of Central Asia. Collected by Peter Simon Pallas, botanist to Catherine II of Russia. (Original label.)

Specimens by Peter Forskol, a botanist-traveller, in Arabia and Egypt, author of "Flora Aegyptiaco-Arabica", 1775, e.g. (6955) *Cliffortia ternata* (with original label). (5945) *Aerva tomentosa* (with original label).

Many plants by Nicolaus Joseph de Jacquin, author of "Flora Austriaca", 5 Vols. 1773–1776, e.g. (1328) *Cyperus pannonicus* Jacq. Austria. (5873) *Tussilago sylvestris* Jacq. Austria.

Specimens by A. R. Delile, who accompanied the expedition of Bonaparte to Egypt in 1798; author of "Memoires Botaniques" 1813, e.g. (297) *Avena Foskalii* Egypt. (547) *Festuca fusca* Egypt.

Many plants by Olans Swartz, a Swedish botanist, author of "Flora Indiae Occidentalis" 1797–1806; by Charles Allioni, author of "Flora Piedontana", 1785; Frederick Link, author of "Flora Portugaise" 1804–9; Charles Thunberg, author of "Flora Japonica" 1784; R. Desfontaines, author of "Flora Atlantica" 1800, and others by Schrader, Ehrhart, Buchanan, Menzies, Lachenal, De Saussare, Otto, Pallas, Wallich and Hooker. There are also many 'intimate plants' by Smith, gathered when he was a young man, doing the 'grand tour' of Europe—(2015) *Ixia Bulbocodium*, "gathered on the grassy hills about the fountain of Ergeria, Rome, by J.E.S. 24th February 1787".

All these specimens were a source of great interest to Roscoe, and they are to-day consulted by botanists from many parts of the world.

In 1806 Roscoe was at the zenith of his fame as a politician. He was a member of Parliament for Liverpool; slogans proclaimed his popularity; "Roscoe and integrity"; "For town and trade of Liverpool"; "Roscoe for ever"; "The friend of the people". Yet! amid this success, his personal inclinations were for country air and freedom for himself.

In a letter to Smith dated 20th June 1807, he says:

> "I have for some time past rejoiced in the thought that I am likely to see you in Lancashire in the course of the summer. I already anticipate the happiness I shall have in your society at Allerton, where I must at least claim some portion of your time, and where I shall be delighted to stroll and saunter with you through the fields in an evening, instead of being, locked up, balloting for committees in St. Stephen's. In fact, My dear friend, it requires but little of the efforts of others to drive me from public life."

Just previous to 1808, the idea of sending a Liverpool Expedition to the Middle West to collect American plants, had been taking shape in Roscoe's plans.

LIN. (7–129) 21st November 1808. Roscoe to Smith.

"At a meeting of the Liverpool Botanic Garden, I had the satisfaction of carrying another point which I proposed in the sending out a botanist to investigate the province of Louisiana and the great branches of the Mississippi. The person appointed for this purpose is Mr. John Bradbury . . . We have agreed to give him a salary for three years with other emoluments according to his exertions . . ."

There are 23 letters in the archives of the City Library, leading to the decision to maintain this expedition, and accounts of its progress. Bradbury sailed for America in April 1809, and returned in 1814. He published his experiences in "Travels in the interior of America in the years 1809–1811" (1819). This Liverpool Expedition was the first to collect plants in the Middle West from St. Louis to the Mandans, along the flanks of the mighty Missouri, a distance of 1,800 miles. Many of the plant specimens are now in the Academy of Natural Sciences, Philadelphia, and there are a considerable number at Liverpool. The Bradbury plants have made the City Museums a 'Mecca' for American botanists.

Roscoe's second botanical paper was read to the Linnean Society of London on the 6th November 1810, "On Artificial and Natural Arrangements of Plants". It was published in the Transactions of the Linnean Society, pp. 50–78. Vol. 9, 1815.

"Nature has impressed upon individuals of her vegetable kingdom characters sufficient to enable us to distinguish them from each other . . . The majesty of nature glances before our sight, but as often as we attempt to retain her, she eludes our efforts . . . That the System of Linneaus formed an artificial and not a natural one, must be admitted; that it was always considered so by Linneaus, is evident from all his works . . . That the work of Jussiau, considered as an illustration of natural affinities of plants, possesses great and intrinsic merit . . . In fact the two methods are as distinct in their objects, as they are in their merits, and should not be confounded with each other . . ."

A brilliant exposition of a leading controversial topic of his day.

Roscoe's third and last article to the Linnean Society was read on the 1st February 1814. "Remarks on Dr. Roxburgh's Descriptions of the Monandrian Plants of India". It was published in the Transactions of the Linnean Society of London, pp. 270–282. Vol. 11, 1815.

"I have just received the 11th volume of the 'Asiatic Researches' containing Dr. Roxburgh's article . . . I deplore Roxburgh employing other parts of the flower than the anthera and filament for his distinctions into genera . . . for these distinctions are not only characteristic and permanent, but sufficiently various to extend throughout the whole order, and assign to each genus its proper situation . . ."

In 1811 another important contribution to the herbarium at the Botanic Garden was made by Roscoe.

(LIN. 17–149) 2nd January 1811. Roscoe to Smith.
. . . he tells Smith that he has purchased the collection of Thomas Velley.

Thomas Velley, D.C.L., F.L.S. (1748–1806) was a Colonel in the Oxford Militia. He was interested in flowering plants and seaweeds. Velley's collection of Algae is one of the earliest to be made around the south coasts of England. There are eight quarto volumes of beautifully preserved specimens, well annotated and often accompanied by water colour sketches. Velley was the author of several works, notable amongst them—"Coloured figures of Marine Plants, South Coast of England" 1795. After Velley's death (he was killed in a Stage Coach accident at the Castle Inn, Reading), his widow offered them to Roscoe for 150 guineas. These collections are in the City Museum, and to-day they are consulted by Algologists in the Universities at home and abroad.

The correspondence between Smith and Roscoe flowed backward and forward from 1807 to 1815. It dealt with a wide range of topics, and personal chatter—Smith's contributions to Ree's Cyclopoedia—political contests in Liverpool—affairs in Spain—marriage of Roscoe's son—alterations at Allerton—the treasures of Holkham (the residence of Mr. Coke, afterwards Earl of Leicester), near Norwich—pangs of rheumatism—hymn writing—visit of the Austrian Archdukes to Liverpool . . .

(LIN. 17–186) 3rd October 1814. Smith to Roscoe.
"the main purpose of my letter, which is to make another attempt, at the desire of Mr. Coke, to induce you to visit Holkham. We have spent a delightful fortnight there lately, and two hours almost every day devoted to the examination of manuscripts. I must tell you a part of our 'discoveries'; besides beautifully illuminated manuscripts on vellum of many of the Latin classics, a most exquisite Boccacio, a very fine old Dante, a Chronicle d'Henault . . . and there is one original Monastic Chronicle . . ."

18th June 1815 . . . Battle of Waterloo.

1816, was a very unhappy year for Roscoe—he fell on bad times.

(LIN. 17–207) 6th February 1816. Roscoe to Smith.
. . . he informs Smith of the failure of his Banking House.

LIV. (4469) 22nd February 1816. Smith to Roscoe.
Much about the calamity of Roscoe's affairs. ". . . you know what a mine is under your control at Holkham, and what an occasional diversion botany may afford under my roof."

LIN. (17–213) 5th November 1816. Roscoe to Smith.
. . . Deals with the sale of his collections of pictures . . . part of which have already arrived at Holkham . . . purchased by Mr. Coke.

1817. Roscoe is busy with arrangements for the opening of the Royal Institution (Liverpool).

LIV. (4479) 12th June 1817. Smith to Roscoe.

"It will mark an era in the literature of Britain when your Institution becomes an effectual University, vigorous and increasing . . . farewell my dear friend, I wish I had more time to enjoy your society or your correspondence, but perhaps we may value the more what we can snatch . . ."

Soon after the opening of the Royal Institution in 1818, Smith was invited to give a series of lectures on botany. There is in the library of the Linnean Society an outline of the course of lectures which he gave and also an admission card to them (LIN. 40–100. Sect. 8). Later he gave a second course of lectures.

LIV. (4486) 17th May 1819. Smith to Roscoe.

"Pray present my best thanks and respects to the Committee of your Royal Institution for the honour they have done me, in appointing me Professor of Botany . . . It will be convenient for me to deliver a course next year (1820) during four weeks in July, 12 lectures."

The improvement in Roscoe's financial situation was largely due to the unobtrusive efforts of certain friends. There are a few letters at Liverpool between Dr. Thomas Stewart Traill (1781–1862) and Sir James E. Smith. These were written with the object of raising funds for Roscoe; between December 1818 and May 1821 a sum of £3,000 was handed to Roscoe, and also an annuity of £100 per annum (from Mr. Coke of Holkham). Roscoe was again striding forth with many projects, full of optimism and vigour. He had regained his interest in cultural and scientific affairs.

(LIN. 17–240) 19th August 1819. Roscoe to Smith.

Important news! . . . he informs Smith that he is still interested in Scitamineous plants.

LIV. (4478) 27th September 1819. Smith to Roscoe.

"It comforts and delights me to hear your love for the Scitamineae is unimpaired and your collections (at Botanic Garden, Liverpool) of them so rich."

Meanwhile the acquisition of plants from abroad was ever increasing, especially Indian plants. Roscoe was now in correspondence with Dr. Wallich of Calcutta. Dr. Nathaniel Wallich (1786–1854) was Superintendent of the Calcutta Botanic Garden, having succeeded Dr. Roxburgh. Wallich made important collections in the Himalaya, Nepal and Burma. In the archives at Liverpool there are 58 long letters between Wallich and Roscoe.

LIV. (5109) 11th March 1819. Wallich to Roscoe.

"The parcel which I referred to in my letter dated the 27th inst. contained growing plants . . . sent via Capt. Oxley . . . an irresistible inclination impels me to continue in my way until I shall be favoured with a second and future letters from you . . ."

LIV. (5110) 20th August 1819. Wallich to Roscoe.

". . . . as soon as the rainy season is over I shall immediately make up several chests . . . my warmest thanks to the Proprietors (Liverpool Botanic Garden) for their acceptable donation . . . I have pleasure in enclosing a list of chests containing roots, chiefly from Nepal and Syllet . . . among them Hedychia, if you put all the beauty of all the Scitamineae together, you will judge it inferior to that lovely charming plant *Hedychium Gardnerionum.* I hope it may prove a distinct species . . ."

He encloses a list of chests of roots, etc. sent since August 1818, among which is a parcel of mosses for W. J. Hooker directed to the care of William Roscoe.

The sailing ship "The Bengal" containing the consignments ran into trouble in the Bay of Bengal and had to put back to Calcutta.

LIV. (5112) 20th November 1819. Wallich to Roscoe.

". . . I return with pleasure from so gloomy a subject (above) to inform you that Captain Hugh Stewart, commanding the 'Albion' has taken charge of the articles which were returned from the unfortunate 'Bengal'.

There are now long intervals between letters from Wallich for he is away from Calcutta on his distant journeys; a letter dated 18th March 1823, describes at length his famous travels in Nepal.

Another of Roscoe's correspondents in India was Dr. William Carey (1761–1834), superintendent of the Church Mission at Serampore, where he had established a garden which became famous. He had received seeds and plants from Roxburgh of Calcutta, with whom he became great friends. Whilst Roxburgh was ill in England, Carey edited and published for him "Hortus Bengalensis" (1814), and after his death "Flora Indica" in 3 Vols. 1816.

An absence from the homeland for long years, often creates desires for scenes and things once familiar. A stray seed from a bag that Carey had received from a Yorkshire friend, germinated and flowered—a Daisy! Carey longed to woo our English wild flowers to bloom in shaded places in the East:

"I know not that I ever enjoyed, since leaving Europe, a simple pleasure so exquisite as the sight of this English Daisy—not having seen one for more than thirty years."

Dr. Carey attributes to Roscoe's article on Scitamineae, his own increased interest in this family of plants. He tells Roscoe, that on the return of Lady Hastings from Central India, and on Wallich's return from Nepal, he intends to send him some new species of the family. He is also hopeful of supplies of new species from Sumatra and Borneo, through the kindness of Sir Stamford Raffles.

LIV. (740) 15th March 1820. Roscoe to Carey.

". . . Mutually interested in investigation and arrangement of Scitamineous plants, of which we are indebted to you and Dr. Wallich for such a number as I believe have rendered our collections supreme to any other in the United Kingdom . . . It is now 20 years since I began to pay attention to this tribe of plants, at which time the species introduced into this country were very few, and consequently the knowledge of them imperfect . . . the efforts that have since been made by the late Dr. Roxburgh, Dr. Hamilton, and yet more recently by yourself and Dr. Wallich, have been such important additions to the number of species as I could have scarcely ventured to hope . . ."

About 1820, the Liverpool Botanic Garden was cultivating many species of Orchids, in fact, Roscoe was pioneering in establishing natural species and introducing them into the 'stoves' of the conservatories of Britain. These days, the plants of this fascinating family, are mainly hybrids-crosses and re-crosses effected over the years, producing 'improved' blooms of great charm. In 1820, the 'craze' for acquiring, cultivating and owning orchids was just beginning; it quickly became a 'fashion' and lasted a great many years. About 1890, there was a waning in popularity, and down to the early decades of this century they did not occupy undue attention. Orchid culture is now in the ascendancy again and rapidly becoming popular once more. In this respect Liverpool is again pioneering, and building up collections of great beauty and merit.

A visitor to the Botanic Gardens, at various times during the years 1819–1824 would have seen the following orchids in bloom—they are all described and figured in "Exotic Botany" by W. J. Hooker 1823–1827.

Dendrobium Pierardi. Rox. MS/S.

This plant was sent to the Liverpool Botanic Garden in 1819 by Dr. Carey. It had been discovered by M. Pierardi in the Delta of the Ganges, growing on trees in a pendant position and reaching up to 6 feet in length; often covered with masses of bloom. The flowers are 1½ inches across, with pink wings and a yellow lip diffused with red; they are borne on a lax spike of many blooms. A portion of this plant from the Liverpool 'stove' is figured and described in "Exot. Bot." P. 9, t 9, Vol. 1 (1823).

Dendrobium fimbriatum Br.

This plant was sent from Calcutta by Dr. Wallich. It is a beautiful species, with spikes of deep orange flowers with fringed lips.

W. J. Hooker says, "among the many valuable plants which in the month of April last, I had the gratification of seeing at the rich Botanic Garden at Liverpool . . . none interested me more than that which I have figured. It was cultivated along with many other choice tropical orchideous plants, with a degree of success which I have never before witnessed." "Exot. Bot." p. 77 t. 77 Vol. 1 (1823).

Dendrobium Barringtoniae Sm.

This plant was imported from Jamaica, where it grows on tree trunks. It flowered in the 'stove' at the Botanic Garden in April 1824. It bears a single large green flower, with a cream lip and hood. "Exot. Bot." p. 119. t. 119. Vol. 2 (1825).

Dendrobium Harrisoniae (Mrs. Harrison's Dendrobium).

This plant was received by Mrs. Arnold Harrison of Aigburth in 1823 from her brother in Rio de Janeiro. She gave it to the Botanic Garden in 1824, along with an excellent drawing, by herself. Its large yellow flower with a cleft fringed lip is produced singly from the base of the bulb. J. W. Hooker says—"I name it in honour of a lady, who has not only introduced this, but many other new and rare plants to our gardens, and who cultivates them with great success." "Exot. Bot." p. 120. t. 120 Vol. 2 (1825).

Dendrobium pubescens

This plant was received at Liverpool Botanic Garden in 1820 from Dr. Wallich, Calcutta. In 1824, it produced two beautiful spikes of yellow flowers. Hooker received a spike, a leaf, and a sketch from which he described and figured it. "Exot. Bot." p. 124, t. 124. Vol. 2 (1825).

Dendrobium album Br.

A plant received from Jamaica, with single erect almost white flowers. "Exot. Bot." p. 142, t. 142. Vol. 2 (1825).

Dendrobium Calceolaria Carey MS/S.

A plant of the East Indies, sent by Dr. Carey. Five or six large 'netted' beautiful pink flowers borne on a spike. "Exot. Bot." p. 184, t. 184. Vol. 3 (1827).

Serapias Lingua L.

William Swainson sent plants from Palermo, Sicily, to the Botanic Garden. They flowered for two seasons, bearing isolated curious maroon striped yellow blooms. "Exot. Bot." p. 11, t. 11. Vol. 1 (1823).

(2236) There is a specimen of one of these in the City Museums.

Cypripedium insigne Wall. MS/S.

A native of Nepal, sent by Wallich from Calcutta in 1821. The figure and description by Lindley and by Hooker are from plants from the Botanic Garden. This is the now familiar large yellow-blotched brown 'Lady's Slipper.' "Exot. Bot." p. 34, t. 34. Vol. 1 (1823).

(2105) There is a specimen of one of these plants in the City Museums.

Epidenrum nutans Sm.

Bears large spikes of creamy white flowers. It was introduced into the country in 1793 from Jamaica by Rear-Admiral Bligh and cultivated by Loddiges of Hackney. Plants were sent to the Botanic Garden—and flowering specimens from these were sent to Hooker in 1822. "Exot. Bot." p. 50, t. 50. Vol.1 (1823).

Cymbidium lancifolium H.

A native of East Indies. Sent by Wallich to the Botanic Garden where it flowered in 1822. A lax branched spike of small pale flowers, reddish lip, cream wings. "Exot. Bot." p. 51, t. 51. Vol. 1 (1823).

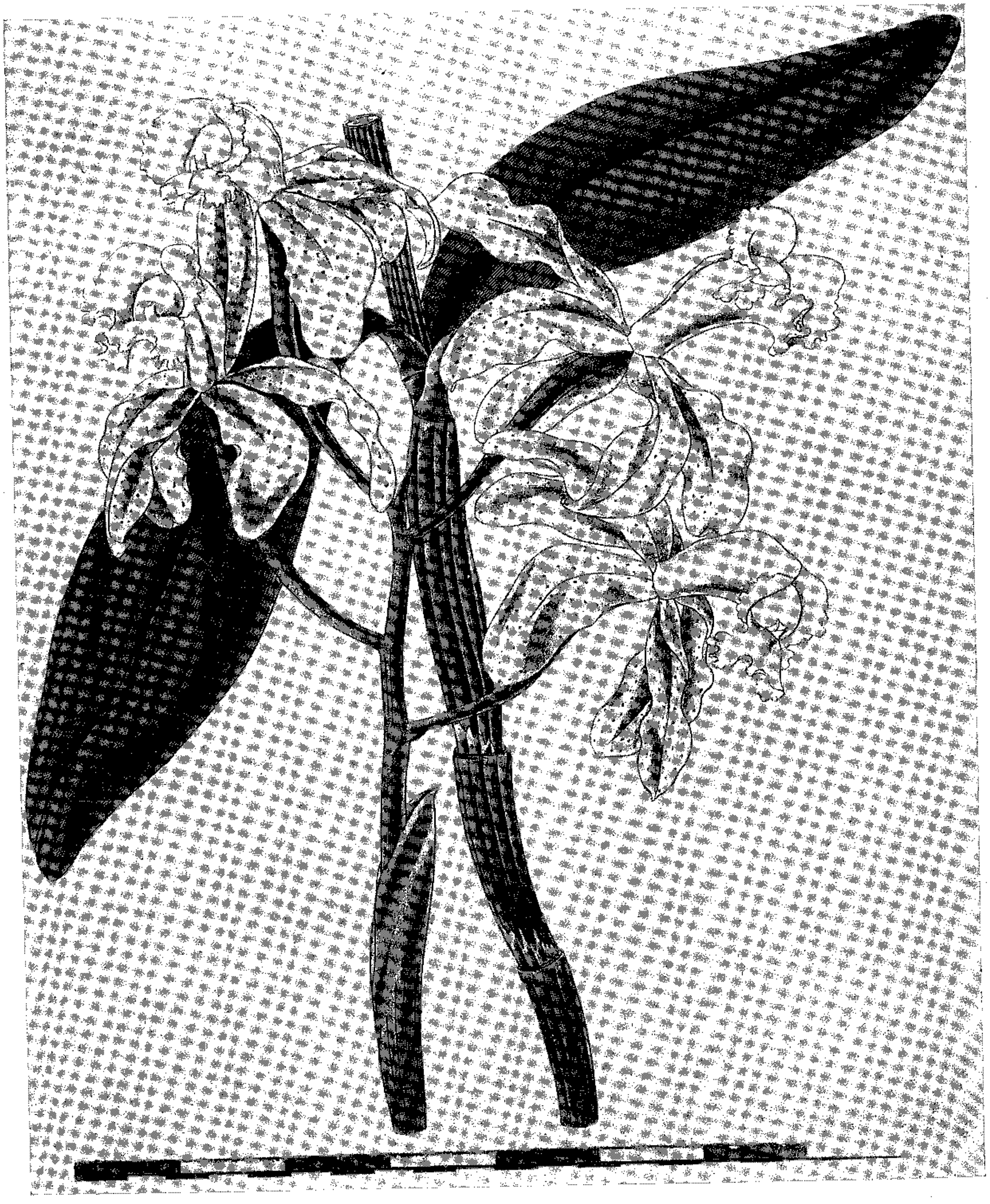


Fig. 9. *Cattleya Loddigesi* Lindl. Family, Orchidaceae. Introduced for the first time into Great Britain at the Botanic Garden, Liverpool, from the neighbourhood of St. Paul's, Brazil. It blossomed in 1811. Hooker, "Exotic Botany" p. 186. t. 186. Vol. 3 (1827).

Vanda trichorhiza

Sent by Wallich from Calcutta. Flowers with striped brown wings and purple lips. "Exot. Bot." p. 72, t. 72 Vol. 1. (1823).

Cattleya Loddigesii Lind. (Fig. 9)

It was introduced into Britain from St. Paul, Brazil, by Mr. Woodforde in 1820. Large pink-purple flower with small green dots, fringed tubular lip. Flowered at the Botanic Garden in 1811. "Exot. Bot." p. 186, t. 186. Vol. 3 (1827).

Maxallaria parvula H.

Single flowers of brown and maroon.

This plant was from the collection of Mrs. Harrison of Aigburth. It was discovered by Mr. Harrison of Brazil on tree trunks in the Organ Mountains, sixty miles from Rio. "Exot. Bot." p. 217, t. 217. Vol 3 (1827).

Out of the 232 plants described and figured in colour in the three volumes of "Exotic Botany", 60 are from plants sent to W. J. Hooker from the Liverpool Botanic Garden.

The standard botanical journals of that period are full of references to plants grown at the Botanic Garden, e.g.

Tillandsia psittacina—Parrot-flowered Tillandsia. Family, Bromeliaceae.

"An inhabitant of tree trunks. Recently introduced by William Harrison of Rio de Janeiro to the collection of his brother Richard Harrison of Liverpool. Curtis Bot Mag. No. 19, July 1828.

Cypripedium insigne

an orchid from Nepal, from Dr. Wallich to Liverpool Botanic Garden. Botanical Cabinet, May 1828.

Pitcairnia flammea. Family, Bromeliaceae.

From Rio by William Harrison, "to whose exertions we owe the introduction of a large number of Brazilian plants." Edwards Botanical Register, Sept. 1828.

There are, at Liverpool, nine letters between Roscoe and Sir William Jackson Hooker (1785–1865).

LIV. (2125) 14th February 1819. Hooker to Roscoe.

"I have just heard from Dr. Wallich of Calcutta Botanic Gardens, that he has been good enough to send by the ship 'Ganger' of Liverpool, a collection of mosses from Nepal which he has comitted to your care . . ."

LIV. (2127) 9th March 1822. Hooker to Roscoe.

". . . among the figures there are some species of Canna, about which I am exceedingly puzzled, nor do I know where to seek assistance in a genus which is as little understood, but by applying to you who have deeply studied the whole family to which it belongs."

LIV. (2128) March 1822. Roscoe to Hooker.

"In reply to your enquiry respecting the different species of Canna. I beg to observe that Canna gigantea of the Bot. Mag. No. 206 is certainly C. latifolia . . ."

The last of the letters from Hooker deals with Roscoe's request to find out if Mr. Graves would undertake the colouring of the plates in the several parts of 'Monandrian Plants' as they appear.

LIV. (2129) 6th April 1823. Hooker to Roscoe.

". . . I saw Mr. Graves upon the subject of colouring your Scitaminious plants, but he cannot correctly fix a price without seeing some of the uncoloured impressions of the plates . . . send samples of plates by Coach."
(Agreement was reached between Graves and Roscoe to produce the coloured plates at £2 each).

In a letter from Dr. Carey to Sir William Hooker, dated 16th June 1830, there is a most prophetic statement: 16th June 1830 . . . from Serampore.

". . . your correspondent, Lady Dalhousie, has paid me a visit, and I dined with her one evening at Lord Bentinck's. She has been examining a great many plants, and has ascertained many of them. We had a great deal of talk about plants, and a little about you! all much to your honour. She is going anon with Lord Dalhousie to Himalaya (Simla) where I doubt not she will discover many valuable plants . . ."

Dr. Carey was quite right—Lady Dalhousie made a splendid collection of Himalayan plants—around Simla—at 9,000 feet. Two years ago (1953), these plants were discovered at Liverpool among the collections of John Forbes Royle—plants from the North Western Himalaya and Cashmere.

The production of magnificent illustrated books, of imperial folio size, was a feature of botanical memoirs of the late 17th and early 18th Century. John Robert Thornton (1768–1837) gave us "The Temple of Flora" (1799–1807). The descriptive text is a mixture of sentiment and legend—indeed, it was produced for the 'cultivated' but non-professional public. The plates are as fine a series as was ever produced, and their fame will survive on their own standard of merit. Then came the three fine imperial folio volumes "Les Roses" by Joseph Pierre Redoute, produced in connection with the Empress Josephine's garden at Malmaison. Following this, was John Sibthorp's (1758–1796), "Flora Graeca", 10 volumes (1806–1840). Sibthorp was Sherardian Professor of Botany at Oxford; and along with Ferdinand Bauer, son of the Court Painter to Prince Lichtenstein of Vienna, he travelled extensively in Italy, the Greek Islands and the mainland of Turkey. They collected 2,300 species of plants during two expeditions, and Bauer produced 965 beautiful drawings. When Sibthorp died at the early age of 38, he left a monetary bequest for publishing "Flora Graeca". The preparation of the work was entrusted to Sir James E. Smith (Roscoe's friend); he issued the first Volume in 1806. There were 35 subscribers at £240 each, and six other copies were printed for sale. The total cost of the book was £15,572; the sale of the copies amounted to £5,863, so that there was a deficit of nearly £9,000 to be met by Sibthorp's estate. Sir James E. Smith did not live long enough to finish the work; he produced volumes 1 to 6, Robert Brown edited volume 7, and Dr. Lindley completed volumes 8, 9 and 10. It may well be that Roscoe was influenced in his decision to produce a major work on patterns such as these, for he had, for a great many years an intimate knowledge of the progress and production of "Flora Graeca".

Correspondence between Smith and Roscoe from 1819–1828 became less frequent; both were ageing and both fully occupied with their respective botanical tasks.

(LIN. 17–248) 29th August 1820. Roscoe to Smith.
Removing to a new house . . . business troubles.

(LIN. 17–264) 20th September 1823. Roscoe to Smith.
Proposals to publish memoir of Monandrian Plants.

(LIN. 17–270) 7th January 1824. Roscoe to Smith.
Monandrian Plants and other works in progress.

(LIN. 17–272) 6th February 1825. Roscoe to Smith.
Progress of Monandrian Plants.

(LIN. 17–279) 1st February 1826. Roscoe to Smith.
Progress of Monandrian Plants.

(LIN. 17–291) 12th August 1827. Roscoe to Smith.
Carrying on botanical work.

(LIN. 17–295) 23rd October 1827. Roscoe to Smith.
Increasing infirmity—anxiety to finish botanical work.

(LIN. 17–299) 29th December 1827. Smith to Roscoe.
Complains of ill health; is continuing with "Flora Graeca".

(LIN. 17–300) 8th January 1828. Roscoe to Smith.
—has had a stroke; is endeavouring to complete his botanical work.

These letters were the end of the correspondence between them; the end of a long friendship—Smith died suddenly in 1828; Roscoe was to follow three years later.

The form of Roscoe's memoir on Scitamineous plants began to take shape in 1820, and by 1824 many of the parts were almost ready. The fifteen parts, price one guinea each, were printed in quick succession; the distribution of the copies to subscribers around

London and abroad was handled by T. Hunneman. He received Part 1 and Part 2 in January 1825; and by September he had also distributed Parts 3, 4, 5 and 6. In July 1826 he received Parts 7 and 8, and in December Parts 9 and 10. By 1828, he had received and distributed the complete set of 15 Parts. (Reference—letters between Roscoe and Hunneman; LIV (2183–2194)).

The complete work was published in one volume in 1828—the issue limited to 150 copies.

Imperial folio 112 figures

Monandrian Plants
of the order
Scitamineae
chiefly drawn from living specimens
arranged according to the system of Linneaus
with descriptions and observations
by
William Roscoe

Liverpool
Printed by George Smith
1828

There are two sections (1) Cannae. (2) Scitamineae; with a synoptic table to each section. Each genus is described in detail, followed by an account and a figure of each species. The style of description in English is clear, the figure for each plant is slightly over-drawn; the colouring is natural. The volume possesses dignity, and reflects care and analytical skill.

The preface reads: "I cannot dismiss the present publication without expressing my obligations to . . . Sir James E. Smith, with whom I have enjoyed many years of literary communion and unbroken friendship . . . Rev Dr. Carey of Serampore and Dr. Wallich—joint editors of Roxburgh's "Flora Indica" . . . Charles Stuart Parker of Liverpool for material from the West Indies and Tropical America . . . To the Rt. Hon. the Earl of Mountnorris, I am indebted for several drawings of coloured figures . . . by native artists at Lucknow, and obtained by His Lordship on his travels through India. Also the Rt. Hon. Lord Stanley, now President of the Linnean Society, whose collections of coloured drawings of exotic plants, both of East and West Indies contain several fine specimens of Scitamineous plants.

To Richard Harrison of Aigburth; Thomas Stewart Traill, M.D. of Liverpool; Joseph Walker of Allerton; for some beautiful drawings from living plants in the Liverpool Botanic Gardens, I am indebted to the accomplished pencil of Miss Rebecca Miller . . . and obligations of a similar nature have been conferred upon me by my daughter-in-law, Mrs. Edward Roscoe, and in various degrees her

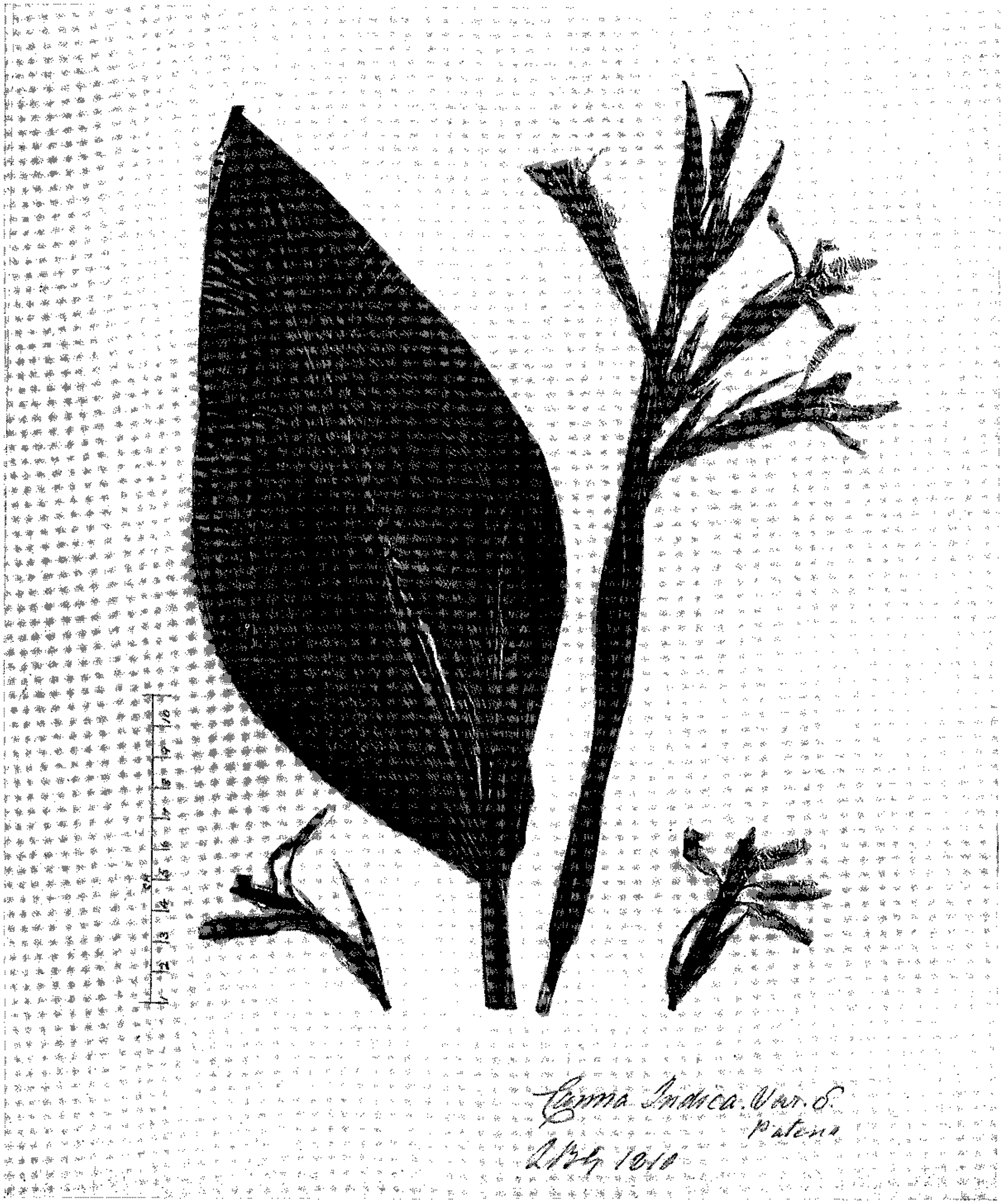


Fig. 10 (2064) *Canna indica var patens* Roscoe. Plant grown at Botanic Garden, Liverpool, and described in "Monandrian Plants".

sister Mrs. James Dixon, Miss Ellen Yates, Miss Emily Fletcher and Miss Mary Waln. To the Committee of the Liverpool Botanic Garden and to John Shepherd and Henry Shepherd for their continual assistance and unremitting attention to me in my labours. Lastly, I have to notice Mr. Thomas Allport, a meritorious young artist who by his commendable diligence has obtained a considerable degree of excellence in botanical delineation; and furnished from the living plants a great proportion of the drawings for the work, all of which have been engraved and coloured under the care and direction of Mr. George Graves, Jnr. of Peckham . . .

Nearly all the drawings were made from plants growing in the Botanic Gardens (Figs. 10 and 11), or in private conservatories, near Liverpool. The flowering dates of the plants for about 30 of the plates are stated—4 (1820); 2 (1821); 7 (1822); 6 (1823); 6 (1824); 3 (1825); 2 (1826). On analysis, it is interesting to find the plants fall into groups of country, source and origin, thus—

The Harrison group from Brazil (6 Plates)

Plate 4 *Canna Edulis* Gawl
"The plant for this figure was from the conservatory of Richard Harrison of Aigburth. It was raised from Brazilian seed and is now 10 feet high."

Plate 14 *Canna carnea* Roscoe . . . Type.
"This plant flowered for the first time in England in the conservatory of Mrs. Arnold Harrison of Aigburth, having been sent from Brazil by William Harrison of Rio de Janeiro."

Plate 26 *Maranta divaricata* Roscoe . . . Type.

Plate 27 *Maranta divaricate* var.
"both plants raised from seed from Brazil, by William Harrison. Flowered in September 1825."

Plate 39 *Phrynium cylindricum* Roscoe . . . Type.

Calathea grandifolia.
"Plant sent from Brazil by Richard Harrison—passed on to the Botanic Garden and flowered in February 1827.

Plate 79. *Costus spiralis* Roscoe . . . Type.
"from Brazil to the Botanic Garden from Richard Harrison of Aigburth."

The Wallich group from India and East Indies (16 Plates)

Plate 33 *Phrynium parviflorum* Roxb.
"roots received from Wallich in 1820. Flowered at Botanic Garden in July 1828."

Plate 47 *Hedychium acuminatum* Roscoe . . . Type.
"living plants sent by Wallich, flowered in October 1822."

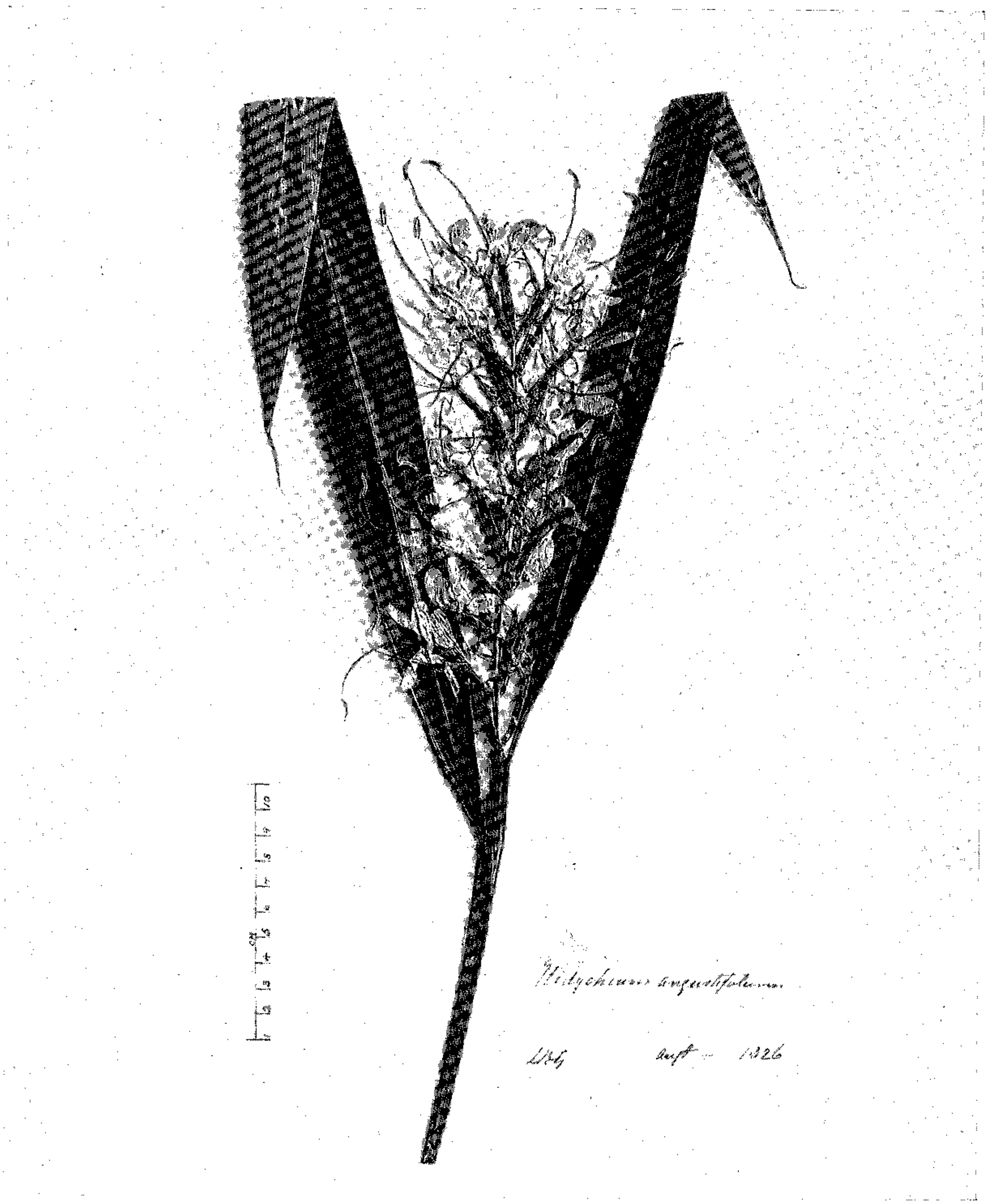
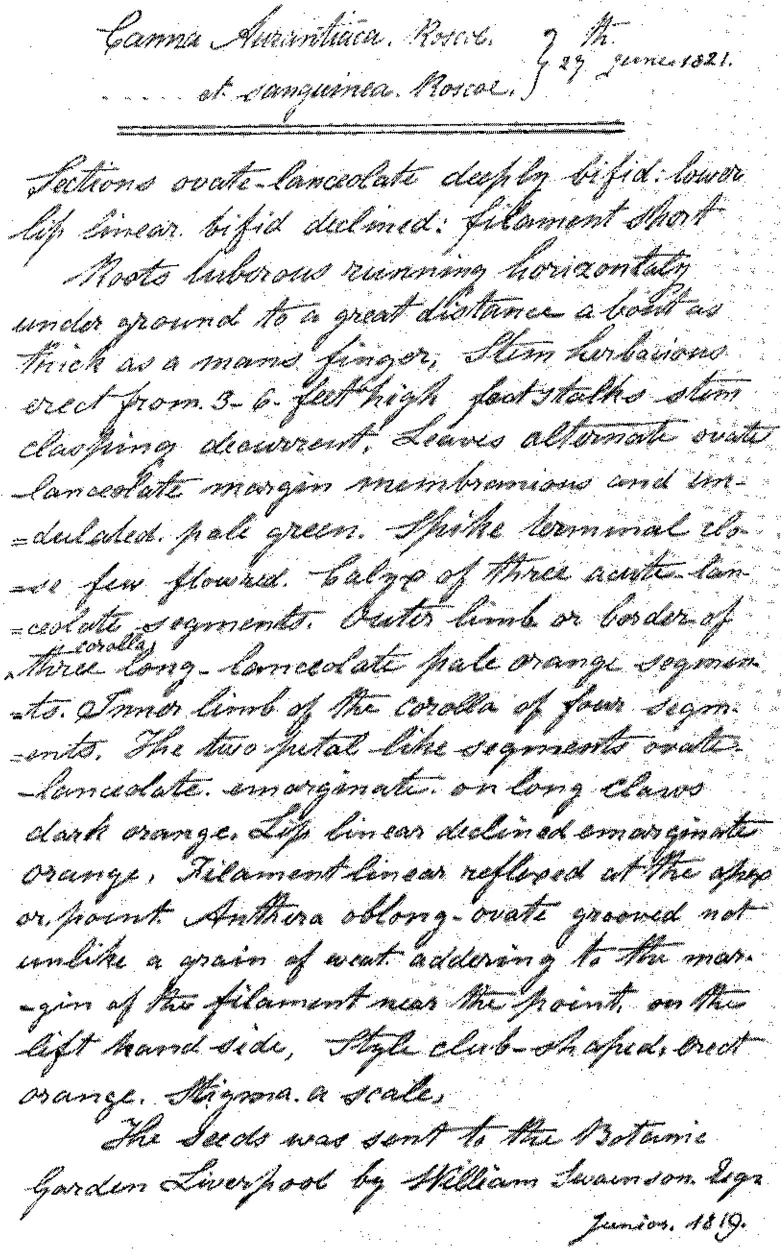


Fig. 11. (2046) *Hedychium angustifolium* Roscoe. A spike of flowers from the same plant from which the drawing for Plate 60 was prepared for "Monandrian Plants". Grown at Liverpool Botanic Garden, 1826.



Canna Aurantiaca. Roscoe. } Fl.
.... et sanguinea. Roscoe. } 27 June 1821.

Sections ovate-lanceolate deeply bifid: lower lip linear. bifid declined: filament short

Roots tuberous running horizontally under ground to a great distance about as thick as a mans finger, Stem herbaceous erect from 3-6-feet high footstalks stem clasping decurrent, Leaves alternate ovate-lanceolate margin membranous and undulated. pale green. Spike terminal close few flowered. Calyx of three acute lanceolate segments. Outer limb or border of corolla three long-lanceolate pale orange segments. Inner limb of the corolla of four segments. The two petal like segments ovate-lanceolate. emarginate. on long claws dark orange. Lip linear declined emarginate orange, Filament linear reflexed at the apex or point. Anthera oblong-ovate grooved not unlike a grain of wheat adhering to the margin of the filament near the point, on the left hand side, Style club-shaped, erect orange. Stigma. a scale.

The Seeds was sent to the Botanic Garden Liverpool by William Swainson. Esqr Junior. 1819.

Fig. 12. An example of the manuscript notes on observations of Scitamineous plants growing and flowering at the Liverpool Botanic Garden, by John Shepherd. These notes were used by Roscoe in his descriptions in "Monandrian Plants".

Plate 63 *Hedychium Gardnerianum* Wall.
"roots sent by Wallich in 1819, flowered in October 1820."

The Dr. Carey group from India and the East Indies (16 Plates)

Plate 49 *Hedychium flavum* Roxb.
"plant sent by Dr Carey, flowered at Botanic Garden in October 1820."

Plate 99 *Curcuma amada* Roxb.
"plants sent by Carey, flowered for the first time in Europe at Botanic Garden, 29th July 1822."

The C. S. Parker group from West Indies (8 Plates)

Plate 42 *Phrynium Parkeri* Roscoe . . . . . Type.

Ischnosiphon Parkerii.
"drawn from a preserved specimen discovered in Grenada."

The Lord Milton, Wentworth House group (7 Plates)

Plate 7 *Canna pedunculata* Sims
"plant sent from Wentworth House Flowered April 1823."

The London Nurseries' group mainly from India (8 Plates)

Plate 36 *Phrynium Violaceum* Roscoe . . . Type.

Calathea Violacea
From Loddiges to Botanic Garden.

Plate 52 *Hedychium maximum* Roscoe . . . Type.
From Loddiges to Botanic Garden, flowered May 1822.

The rest of the Plates are of plants received from various sources, e.g. Plate 25 *Maranta indica,* and Plate 28 *Maranta gibba,* were received from Lord Seaforth when he was Governor of Trinidad; Plate 17, *Canna lutea,* sent by Lord Mountnorris from India; there are nine plates prepared from drawings (plants not seen by Roscoe), four of these Plates, 70, 71, 72, 73 are from Chinese drawings in the collection of the Rt. Hon. Lord Stanley of Knowsley Hall.

There is no doubt that John Shepherd, and Henry Shepherd—who was assistant Curator of the Gardens in 1822—took a great part in the making of Roscoe's book. Not only did they cultivate the plants until they bloomed, but they made critical observations of flowers and flower parts necessary for their scientific description and determination. We have in the City Museums, a number of these carefully written descriptions, in the handwriting of John Shepherd, and also the carefully preserved flowers on which they are founded (Figs. 12 and 13). I surmise that Roscoe checked over these descriptions with the plants as they came into flower; in some cases they are adopted word for word in the text of his book; in other cases they are merely altered into more precise botanical language.

(2076) *Canna speciosa* Roscoe.
John Shepherd's description dated 7th May 1821: "Filament declined at apex, red and yellow."
Roscoe's description in "Monandrian Plants": "Filament reflexed at apex, yellow and red."

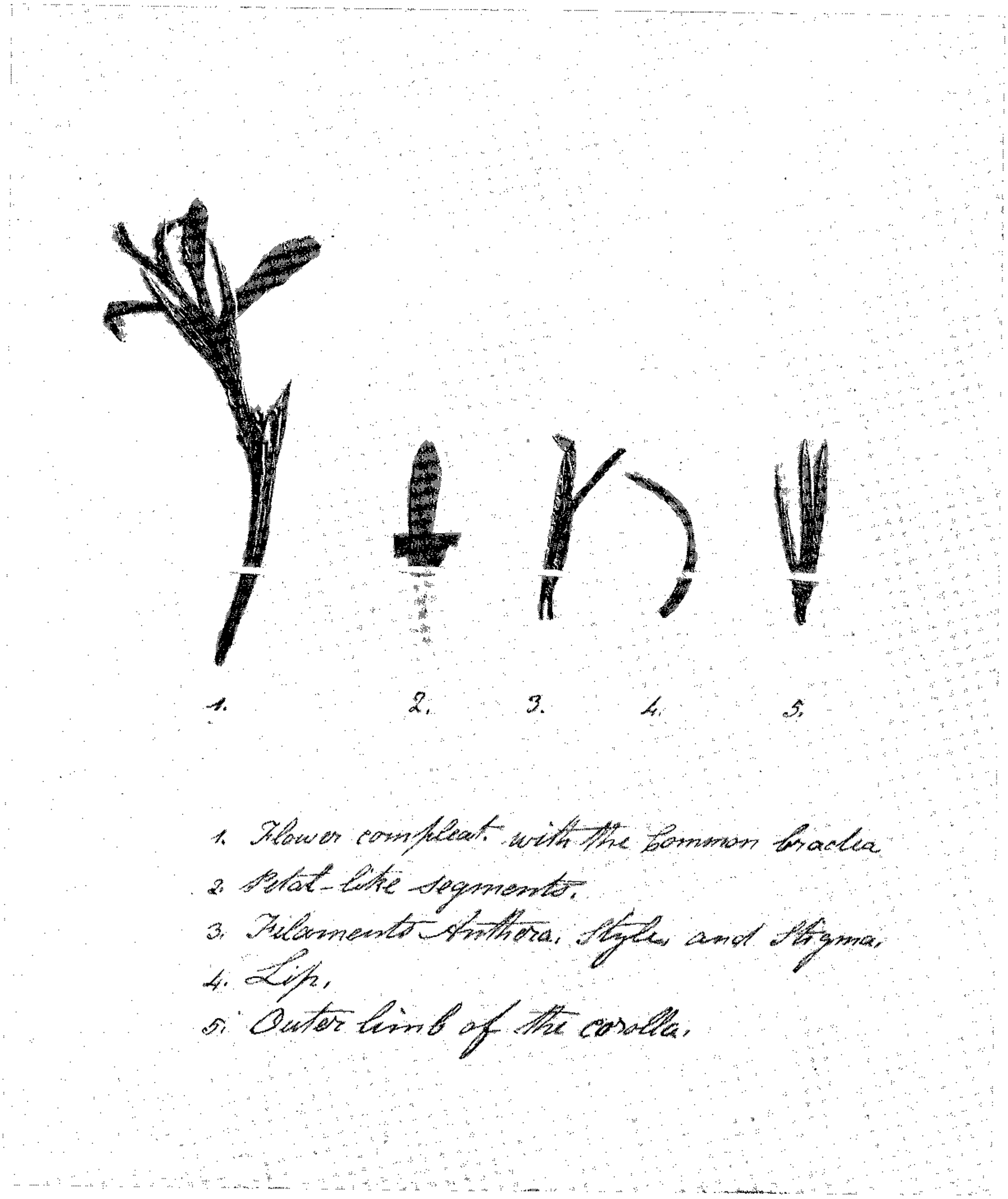
(2056) *Hedychium flavum* Roxb.
John Shepherd's description dated 20th October 1820 is almost identical with that given by Roscoe.

There are in the City Museums a number of specimens of the actual plants or plant parts from which many of the Drawings for the Plates were prepared, e.g.

(2051)	*Hedychium*	*coronarium*	Koen.	Plant 1815	Plate	51
(2047)	,,	,,		Flowers 1821		
(2048)	,,	*coccineum*	Sm.	Plant 1816	,,	58
(2050)	,,	,,		Flowers 1821		
(2046)	,,	*angustifolium*	Ros.	Plant and Flower	,,	60
(2059)	*Kaempferia*	*Galanga*	L.	Plant 1812	,,	92
(2060)	,,	*rotunda*	L	Plant and Flower	,,	97
(2044)	*Curcuma*	*Zedoaria*	Roxb.	Plant 1816	,,	109
(2042)	,,	*Aromatica*	Sal.	Flowers 1808	,,	103

There are also a number of the printer's proofs of the lithographed trial drawings. These have, at some time, been cut in half and used for mounting local plants. There are slight differences between these and the accepted drawings as they eventually appeared, e.g. in *Hedychium maximum*, Plate 52, and in *Zingiber squarrosum*, Plate 89,—a leaf, here and there, has been turned aside to aid the symmetry of the final Plate.

Quite recently a small number of original water colour preparatory sketches of the plants were found; they have been placed in a separate folder and repose in the City Library. They have been assigned as follows—



1. Flower compleat with the common bractea
2. Petal-like segments.
3. Filaments Anthera, Style and Stigma.
4. Lip,
5. Outer limb of the corolla.

Fig. 13. Example of dissections of flowers from which John Shepherd prepared his notes later used by Roscoe in "Monandrian Plants".

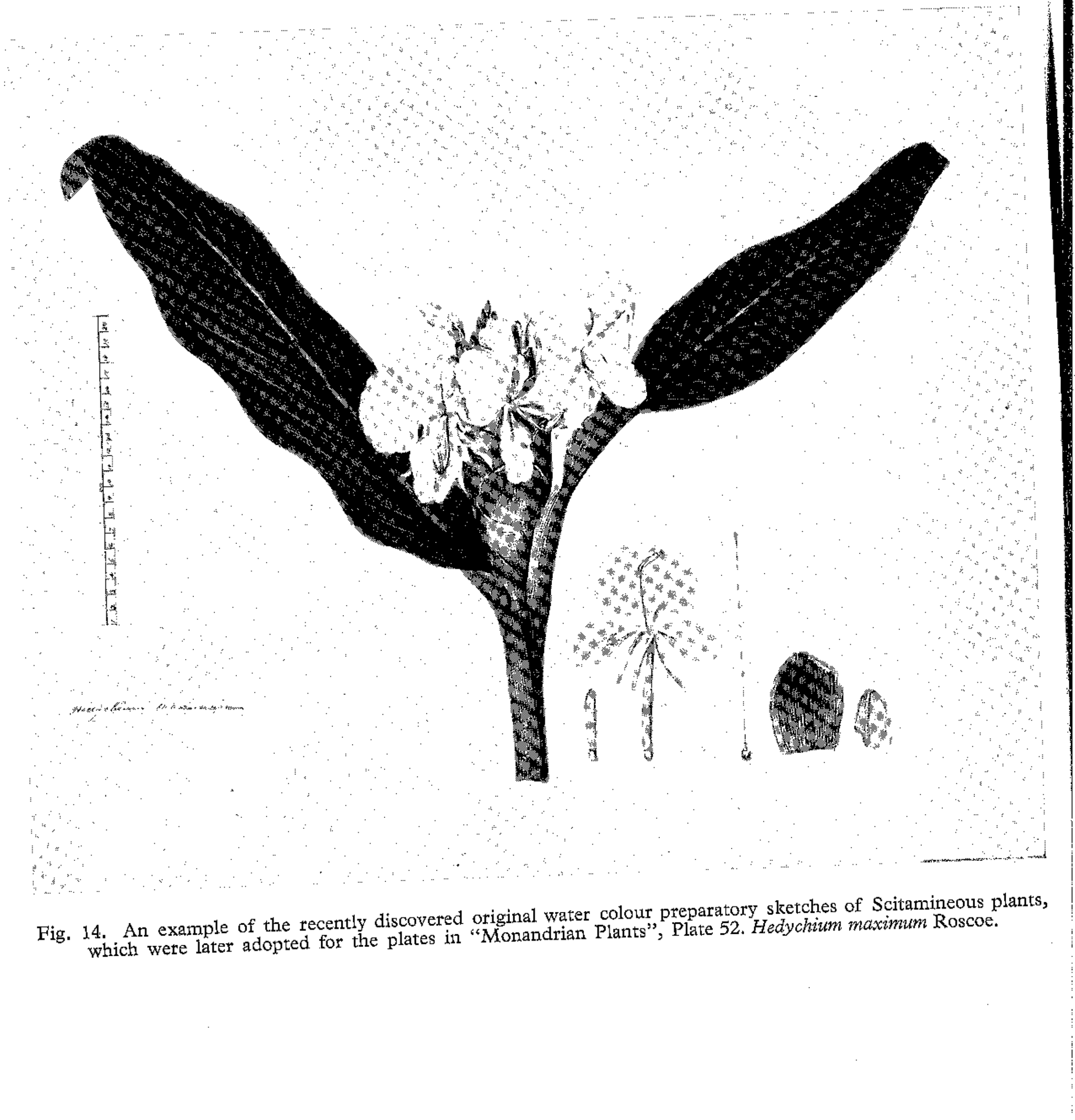


Fig. 14. An example of the recently discovered original water colour preparatory sketches of Scitamineous plants, which were later adopted for the plates in "Monandrian Plants", Plate 52. *Hedychium maximum* Roscoe.

Hedychium maximum (*Fig.* 14)	Roscoe	Drawing for plate	52
,, *thrysiforme*	Sm	,, ,,	56
,, *flavum*	Roxb.	,, ,,	49
,, *spicatum*	Sm.	,, ,,	48
Curcuma latifolia	Roscoe	,, ,,	108
,, *amarissima*	Roscoe	,, ,,	101
,, *rubescens*	Roxb.	,, ,,	107
Canna aurantica	Roscoe	,, ,,	20
,, *lutea*	Ait.	,, ,,	17
,, *denudata*	Roscoe	,, ,,	22
Alpinia nutans	Roscoe	,, ,,	73
,, *mutuca*	Roxb.	,, ,,	69
Mantissa (*Globba*) *saltatoria*	Sims.	,, ,,	112

There are also sketches of *Curcuma longa* L, and *Kaempferia angustifolia*, both Scitamineous plants, but not published in "Monandrian Plants".

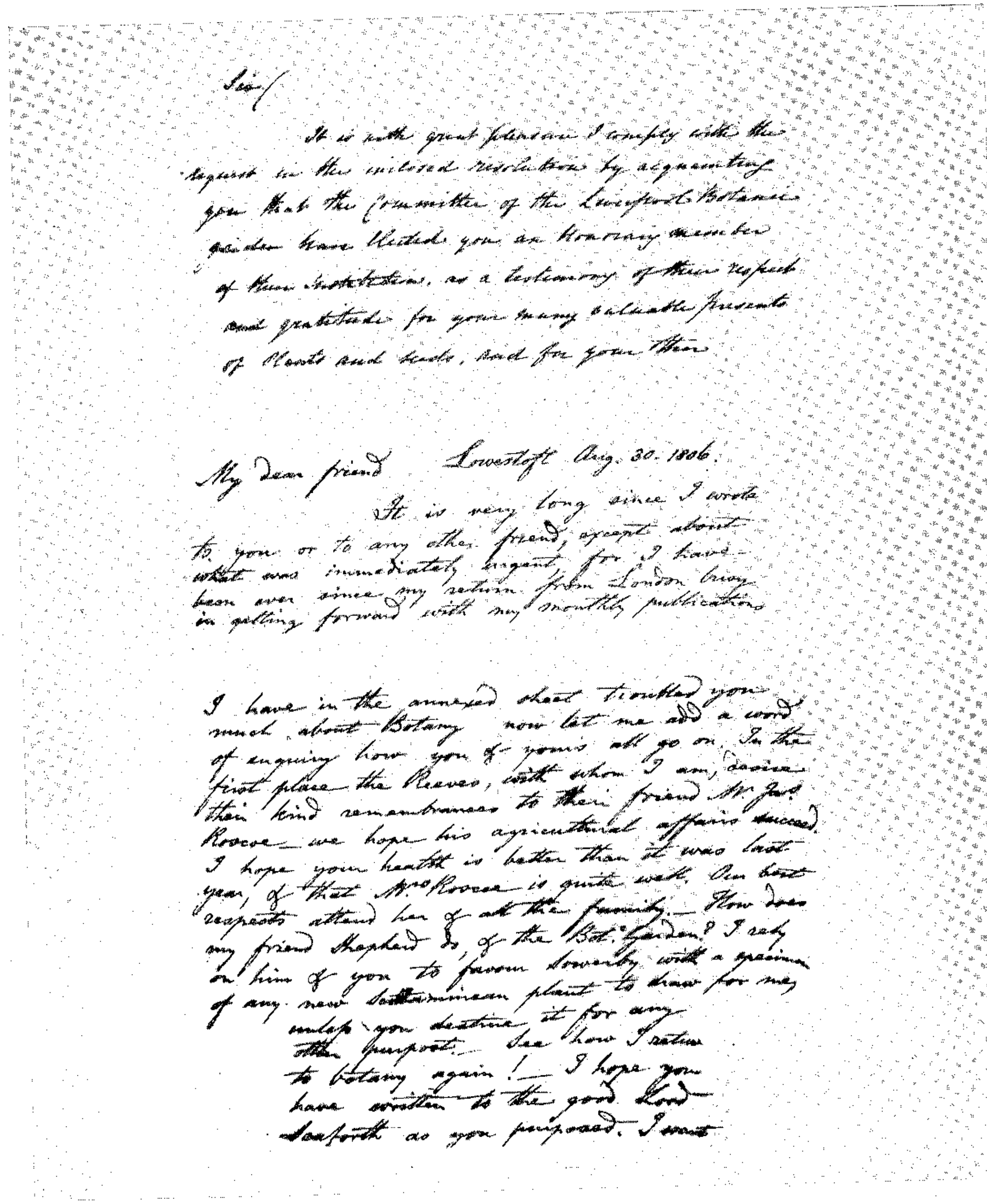
When Dr. Wallich heard that the Memoir was finished, he wrote to Roscoe:

> "God be thanked for enabling you to finish successfully the arduous but noble and classical work on Scitamineae. It will add fresh and unfading laurels to a name already immortalised. Your work will be referred to and studied, when many a more modern growth has passed away."

In 1828, Roscoe was 75 years of age, and only dogged perseverance to finish a task—in the face of increasing infirmity made its completion possible—he says:

> "I am sensible that I may be charged with presumption in opposing my opinion to that of botanists of the first rank, but having devoted a considerable time to the study of these plants, and having had an opportunity for nearly 30 years of examining the largest collection of them ever formed within the limits of Europe, I venture to lay before the public the result of my enquiries."
>
> "there are many more (Scitamineae) known to me, but the length of time that may elapse before they flower and my advanced period of life admonish me to bring the present undertaking to a close . . . There are not less than 200 Scitamineous plants known, whilst the number published in 1807, was 50."

The amount of Roscoe's botanical correspondence still preserved is quite considerable. There are 32 letters between Roscoe and



Sir/

It is with great pleasure I comply with the request in the inclosed resolution by acquainting you that the Committee of the Liverpool Botanic Garden have elected you an Honorary member of their institution, as a testimony of their respect and gratitude for your many valuable presents of Plants and Seeds, and for your ther

---

My dear friend Lowestoft Aug. 30. 1806.

It is very long since I wrote to you or to any other friend, except about what was immediately urgent, for I have been ever since my return from London busy in getting forward with my monthly publication

I have in the annexed sheet troubled you much about Botany now let me add a word of enquiry how you & yours all go on. In the first place the Reeves, with whom I am, desire their kind remembrances to their friend Mr Jas. Roscoe — we hope his agricultural affairs succeed. I hope your health is better than it was last year, & that Mrs Roscoe is quite well. Our best respects attend her & all the family. — How does my friend Shepherd do, & the Bot. Garden? I rely on him & you to favour Sowerby with a specimen of any new Scitamineous plant to draw for me unless you destine it for any other purpose. See how I return to botany again! — I hope you have written to the good Lord Seaforth as you purposed. I must

Fig. 15. Facsimile letters from William Roscoe to Sir James E. Smith; and Sir James E. Smith to William Roscoe.

Wallich, at the Botanic Gardens, Kew, dating from 4th August 1818 to 19th April 1827; 148 letters between Roscoe and Sir James E. Smith at the Linnean Society of London, dating from 8th June 1803 to 8th January 1828 (LIN. 17–1 to 17–300). There are over 200 letters in the archives of the City Libraries, Liverpool, between Roscoe and his botanical associates: among them—Sir J. E. Smith, Dr. Wallich, Dr. Carey, Dawson Turner, Sir Joseph Banks, Traill, President Jefferson, Stackhouse, Swainson and others (Figs. 15 and 16): an array of imposing chronicles of interests, hopes, aspirations and achievements of many contemporaries in botanical circles of Roscoe's day.

A book now much treasured "Floral Illustrations of the Seasons" 1831, by Mrs. Edward Roscoe, contains a collection of flower plates of exceptional charm. The book is dedicated to Roscoe:

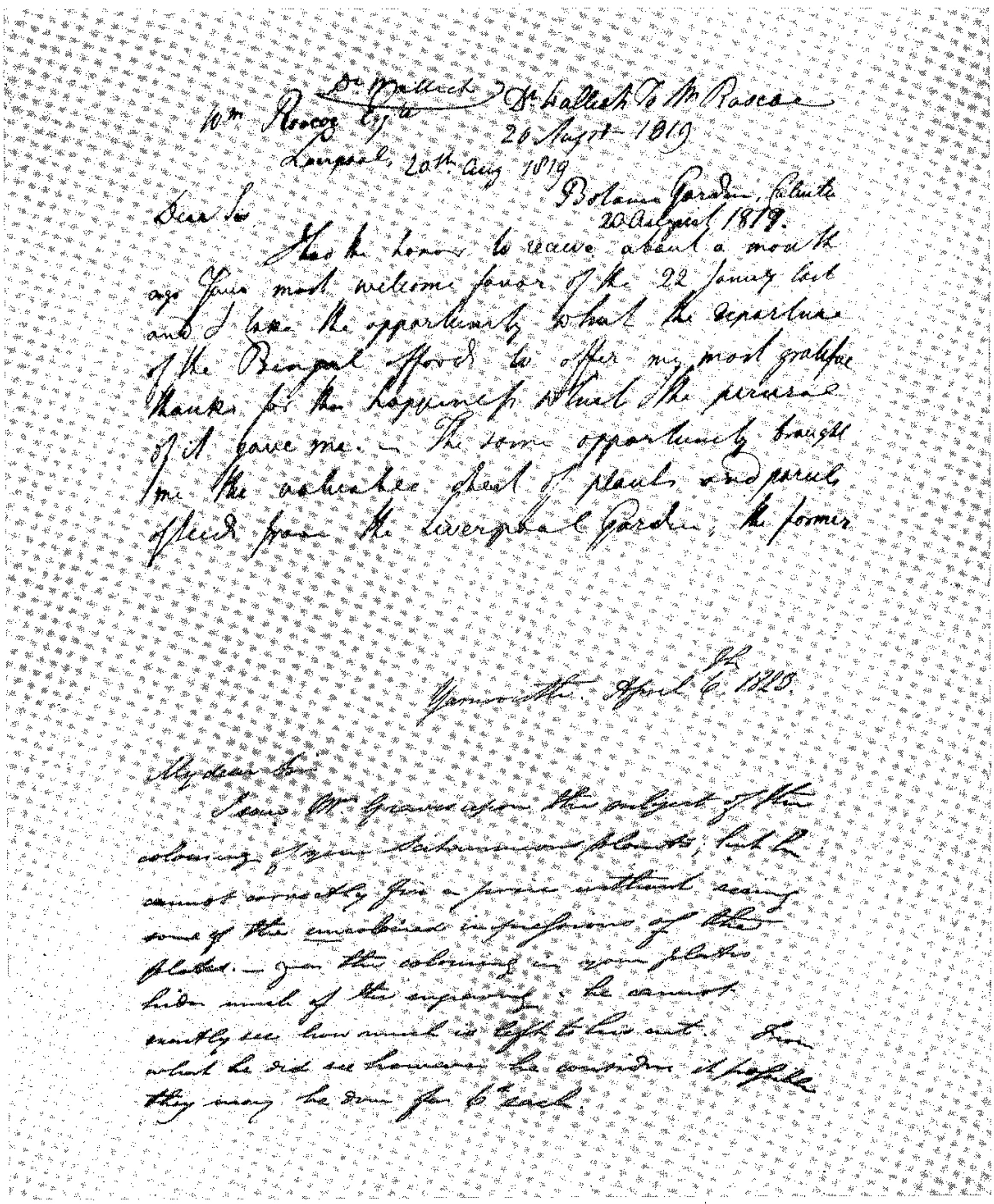
"... I would offer to you, as a mark of respect and affection, but more particularly of gratitude, for the warm attachment you have ever evinced towards me, which has contributed so much to the happiness of my life. Your affectionate Daughter. M.R.

(Mrs. Edward Roscoe—daughter-in-law).

Roscoe was never happy when long separated from his family. He had ten children (seven sons and three daughters) to whom he was deeply attached. The impact of Roscoe's influence was not unlike the sudden appearance of a meteor, which with increasing speed and brightness, traversed the firmament of 18th and early 19th Century Liverpool—leaving a trail of good works, and the foundations of cultural standards to abide in the minds and hearts of—perhaps countless generations of thoughtful citizens of his beloved town.

Roscoe died on Thursday morning, 30th June 1831, at Lodge Lane, Liverpool; and was buried at the Unitarian Church, Renshaw Street, on the 5th July 1831 (Grave I). The Church has long since been demolished, but the revered ground of Roscoe's 'resting place' still remains.

On a late spring day this year I paid a visit to this shrine. Amid the whirl of the traffic of a great City—along one of the highways which radiate from the Adelphi Hotel, and within 200 yards of it, there is an oasis of green-sward wherein William Roscoe lies at rest. I found a small square area abloom with tulips and surrounded by well-kept close-cut grass; in the wall at the head of this area is a simple rectangular red sandstone plaque, bearing the words—William Roscoe. This simple, but dignified treatment of the site—after 120 years—is a fitting and creditable gesture by the City of Liverpool in remembering and honouring one of her most renowned sons.



Dr Wallich Dr Wallich To Mr Roscoe
Wm Roscoe Esqr
20 August 1819
Liverpool, 20th Aug 1819

Botanic Garden, Calcutta
20 April 1819.

Dear Sir,

I had the honour to receive about a month ago your most welcome favor of the 22 January last and I take the opportunity which the departure of the Bengal affords to offer my most grateful thanks for the happiness which the perusal of it gave me. — The same opportunity brought me the valuable chest of plants and parcel of seeds from the Liverpool Garden; the former

---

Yarmouth. April 6th 1823.

My dear Sir

I saw Mr Graves upon the subject of the colouring of your Scitamineous plants, but he cannot exactly give a price without seeing some of the uncoloured impressions of the plates. — for the colouring in your plates hides much of the engraving, he cannot exactly see how much is left to be put in. From what he did see however he considers it possible they may be done for 6d each.

Fig. 16. Facsimile letters from Dr. Wallich to William Roscoe; and Sir William Hooker to William Roscoe.

The flower structure of the group of plants which so strangely fascinated Roscoe is in fact much different from that given by him. Later studies in flower development and morphology disclosed a different plan, which could not have been suspected before these advances were made. Such differences, do not in any way detract from Roscoe's early treatment of the group—as a fundamental exposition of it in the light of the available knowledge of the time:

"*We do but learn to-day what our advances will unteach us to-morrow.*"

Roscoe appears to have had an aptitude for everything, and attempted many things, with a general measure of success. He also had a flair for stimulating knowledgeable and influential persons to aid him in his ideas and projects. With so many interests so strong within him, and each demanding supremacy, he knew no favourite. Through the maze of his activities during a long life, his early love of country pursuits and his interest in botany afforded him occupation and consolation up to his last days.

"*. . . you have a little handful of facts, little bits of a puzzle, and fit 'em together this way and that, and get up and throw 'em down, and say damn—and go out for a walk . . .*" *R.L.S.*

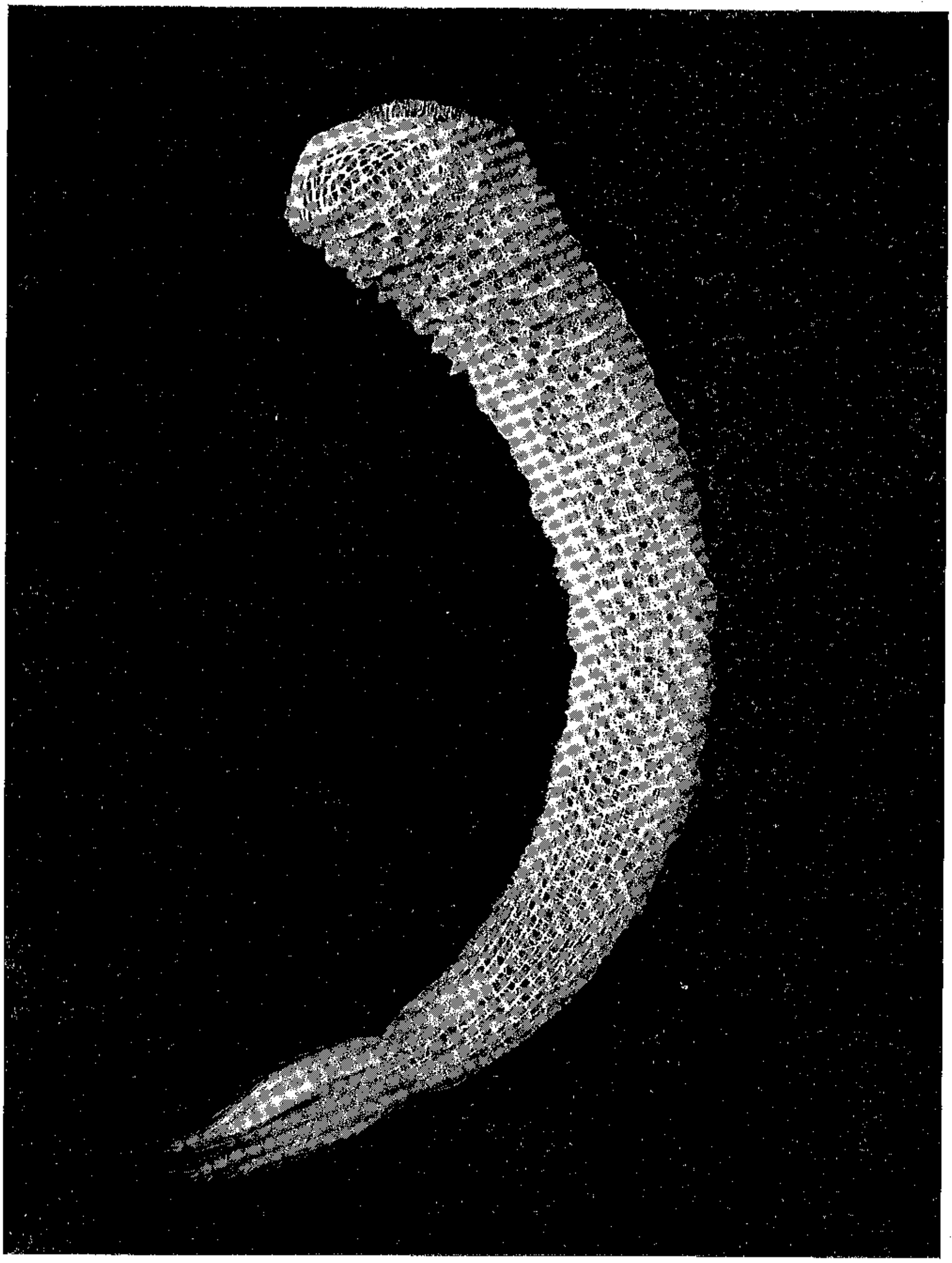


Fig. 1. The Venus' Flower Basket.

THE VENUS' FLOWER BASKET

The specimen figured is the siliceous skeleton of the sponge *Euplectella aspergillum* Owen popularly known as Venus' Flower Basket. In life the beauty of the skeleton is concealed by the gelatinous flesh.

This sponge, first described by the great zoologist Sir Richard Owen in 1841, occurred in deep water off the island of Cebu in the Philippines. The first specimens to reach this country realised high prices and in 1866 Liverpool Museum paid seventeen guineas for two specimens. The price steadily fell and the Venus' Flower Basket became a common ornament in the Victorian drawing room.

In his book "*Notes by a Naturalist on the Challenger*" H. N. Moseley gives an account of the method of fishing used. He states that when H.M.S. *Challenger* visited the island in January 1875 the sponges had become a drug in the market. They were brought off to the ship in washing baskets full and sold at two shillings a dozen.

Unfortunately this overfishing of a species known from only one restricted locality had its inevitable result and there is a possibility that the Venus' Flower Basket is now extinct. Dr. M. Burton states that there is no reliable record of a specimen having been found since the end of the last century.

W. K. FORD.

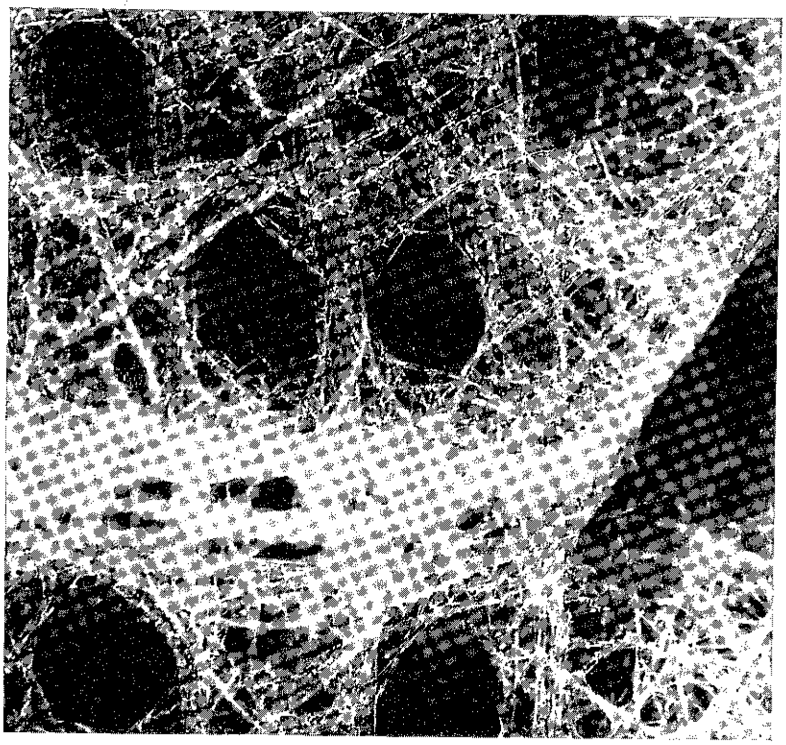


Fig. 2. An enlarged detail of Fig. 1.

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